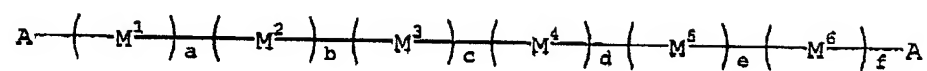


We Claim:

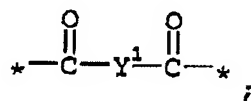
1. A poly-o-hydroxyamide having a formula I



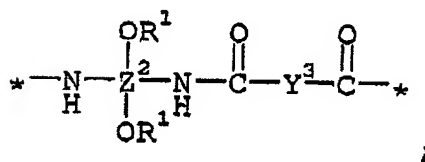
Formula I

wherein

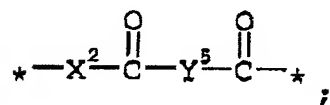
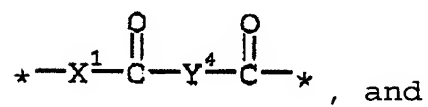
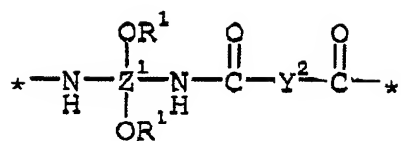
M<sup>1</sup> is



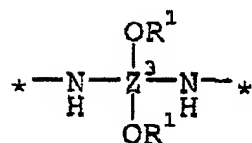
M<sup>2</sup> is



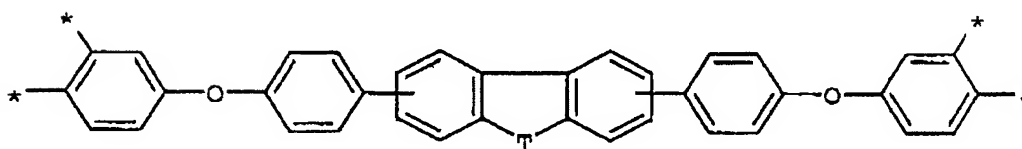
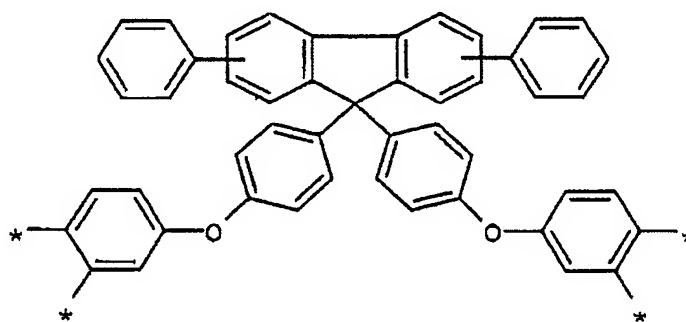
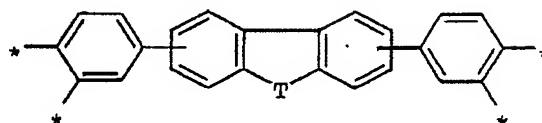
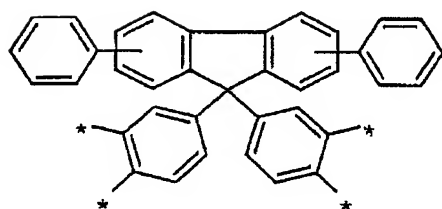
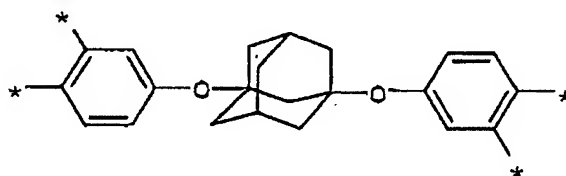
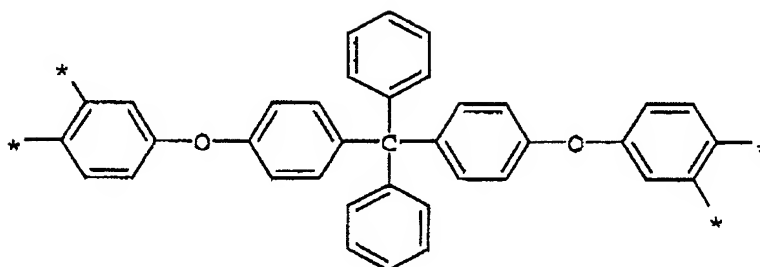
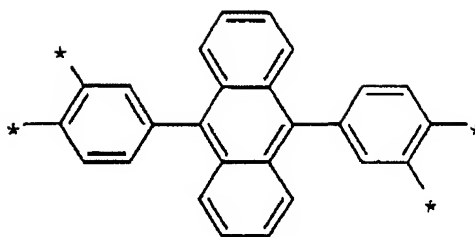
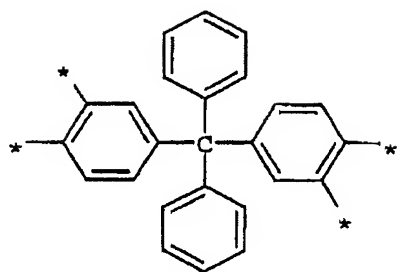
M<sup>3</sup>, M<sup>4</sup>, and M<sup>5</sup>, in each case independently, are monomers selected from the group consisting of



M<sup>6</sup> is

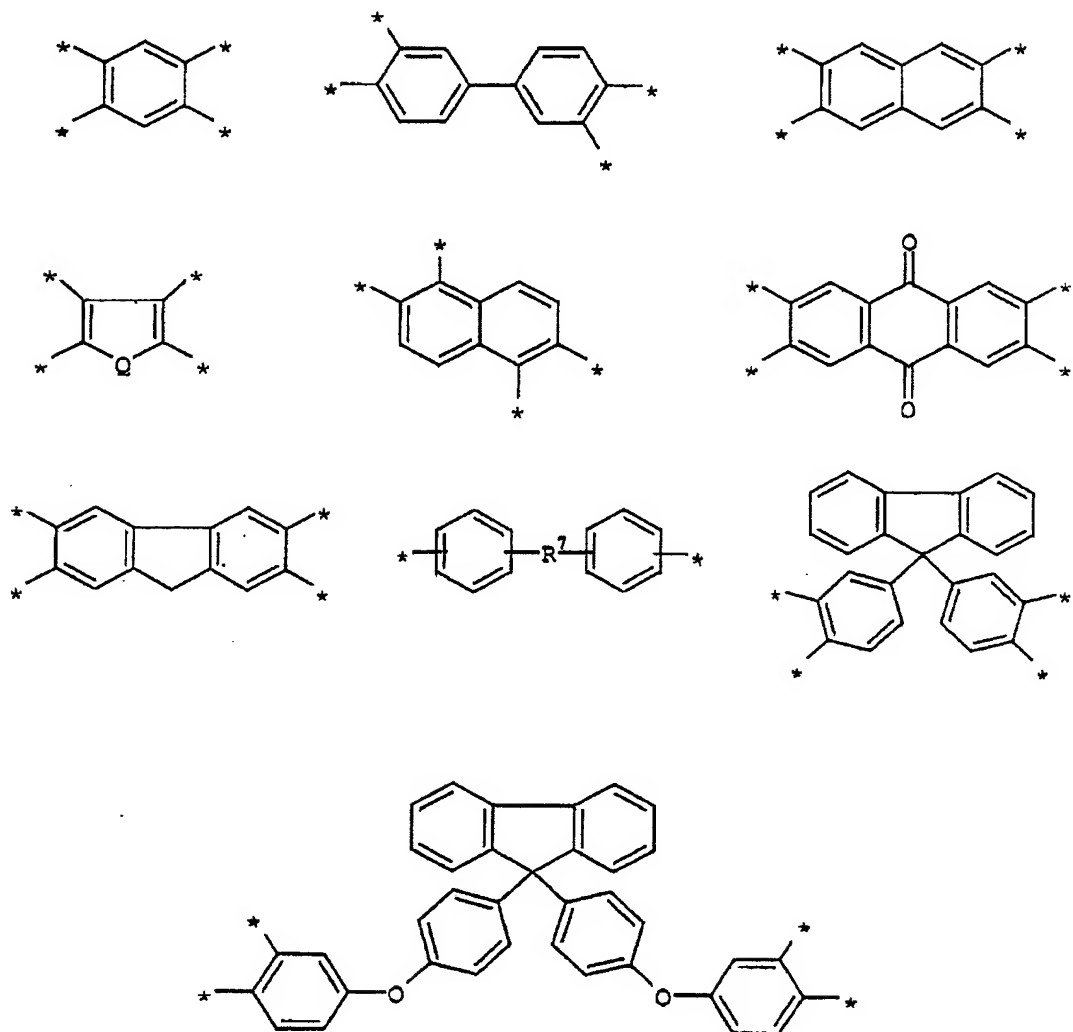


Z<sup>2</sup> is a substituent selected from the group consisting of



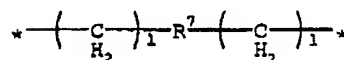
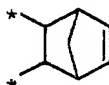
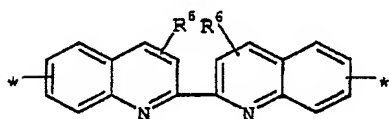
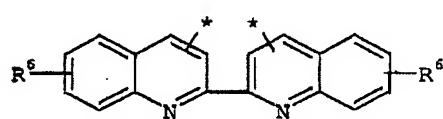
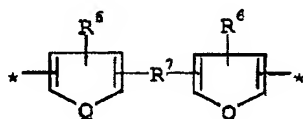
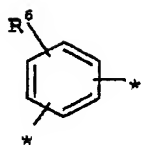
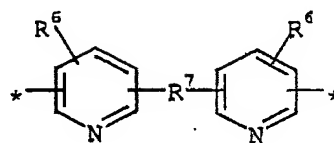
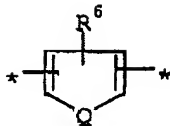
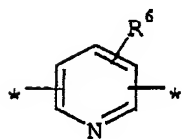
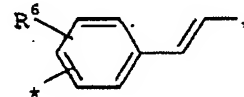
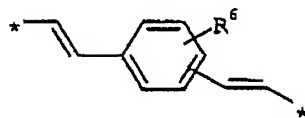
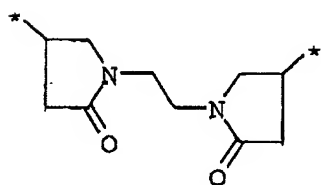
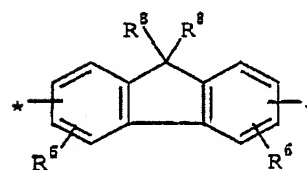
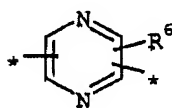
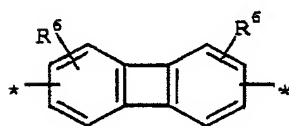
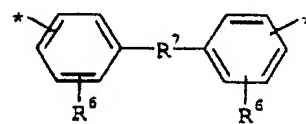
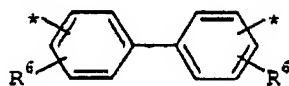
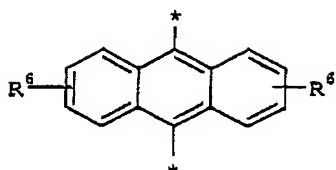
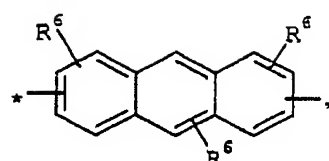
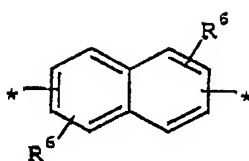
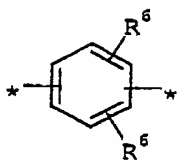
;

$Z^1$  and  $Z^3$ , in each case independently, are substituents selected from the group stated for  $Z^2$ , the group further consisting of

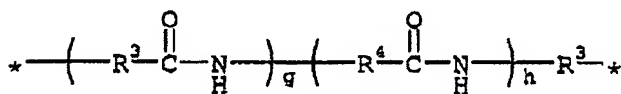
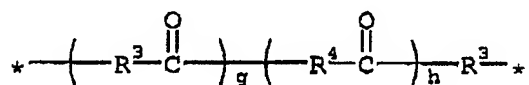
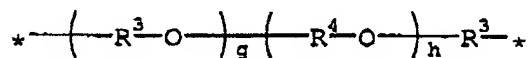
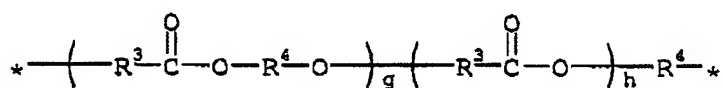
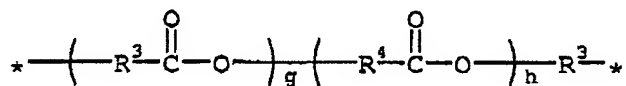
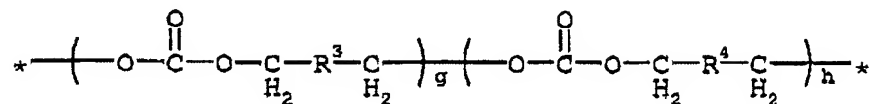


i

$Y^1$ ,  $Y^2$ ,  $Y^3$ ,  $Y^4$ , and  $Y^5$  are substituents selected from the group consisting of

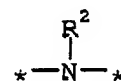
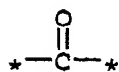
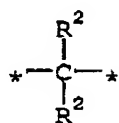


$X^1$  and  $X^2$ , in each case independently, are selected from the group consisting of:



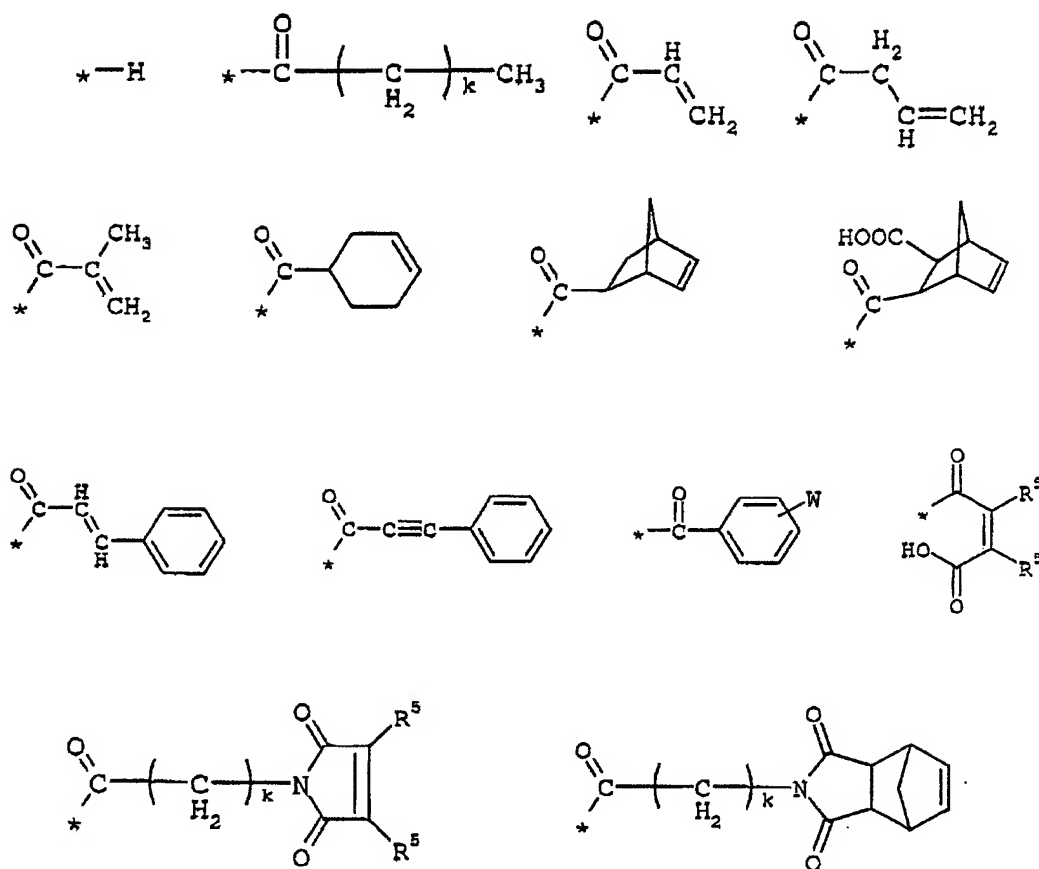
;

T is a substituent selected from the group consisting of

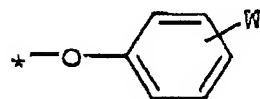
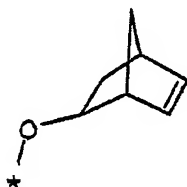
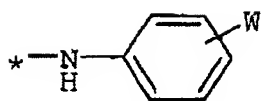
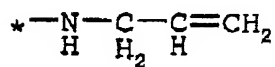
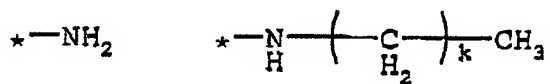
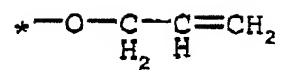
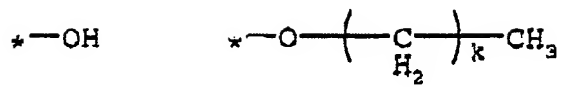


;

A, if at least one of  $a = 0$  and  $f = 1$ , is a substituent selected from the group consisting of



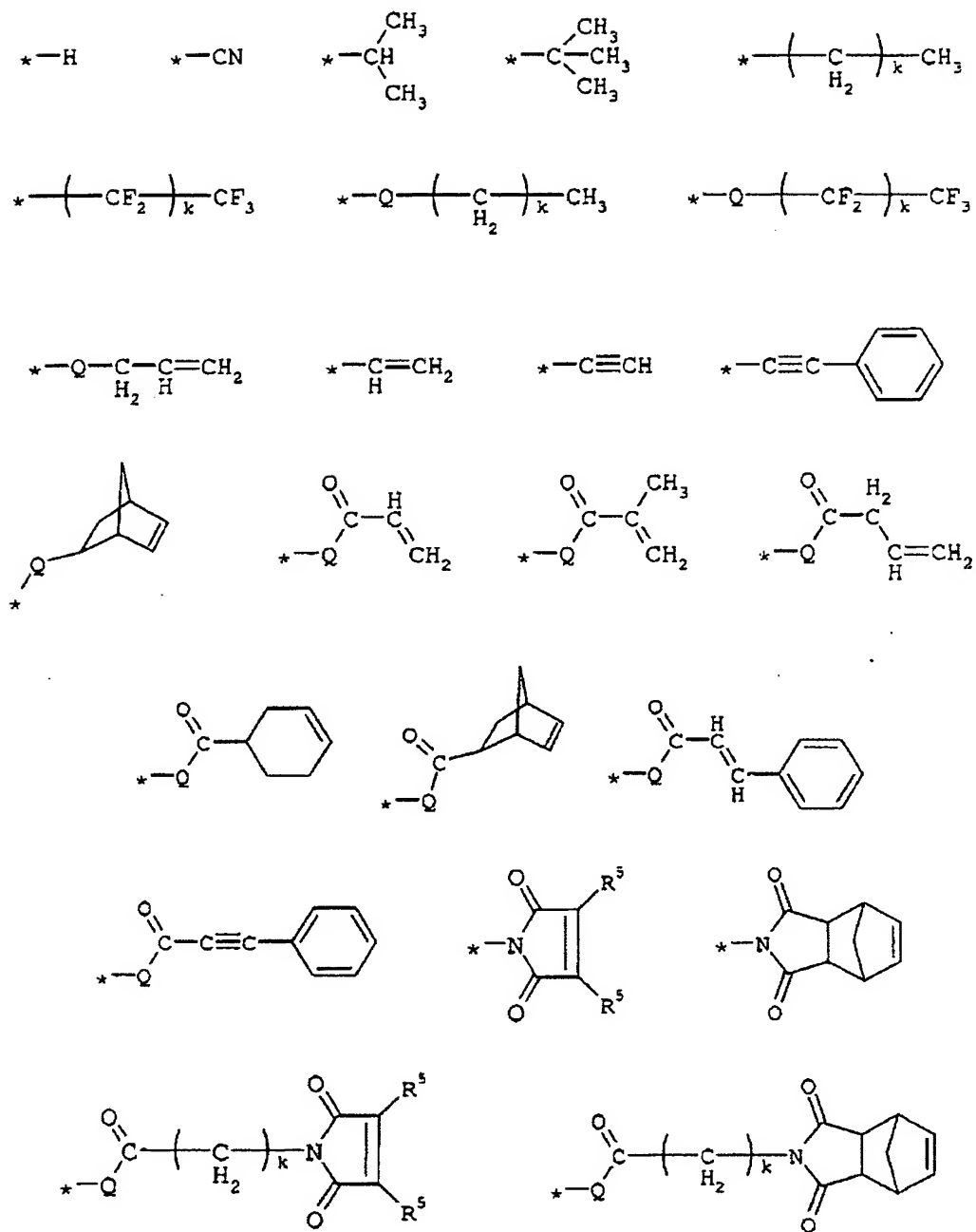
A, if at least one of  $a = 1$  and  $f = 0$ , is a substituent selected from the group consisting of



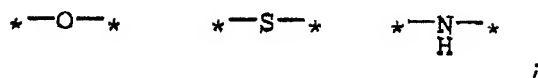
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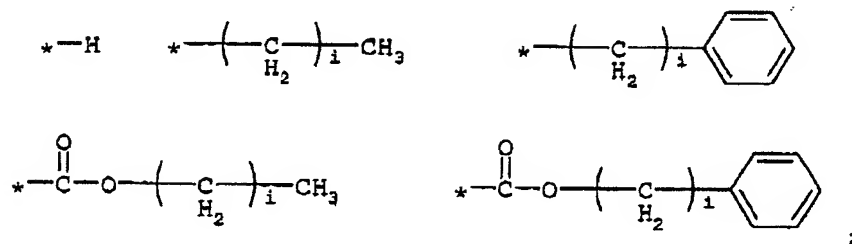
W is a substituent selected from the group consisting of



Q is a substituent selected from the group consisting of



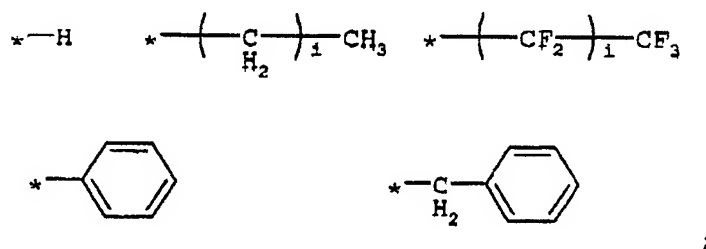
R<sup>1</sup> is a substituent selected from the group consisting of



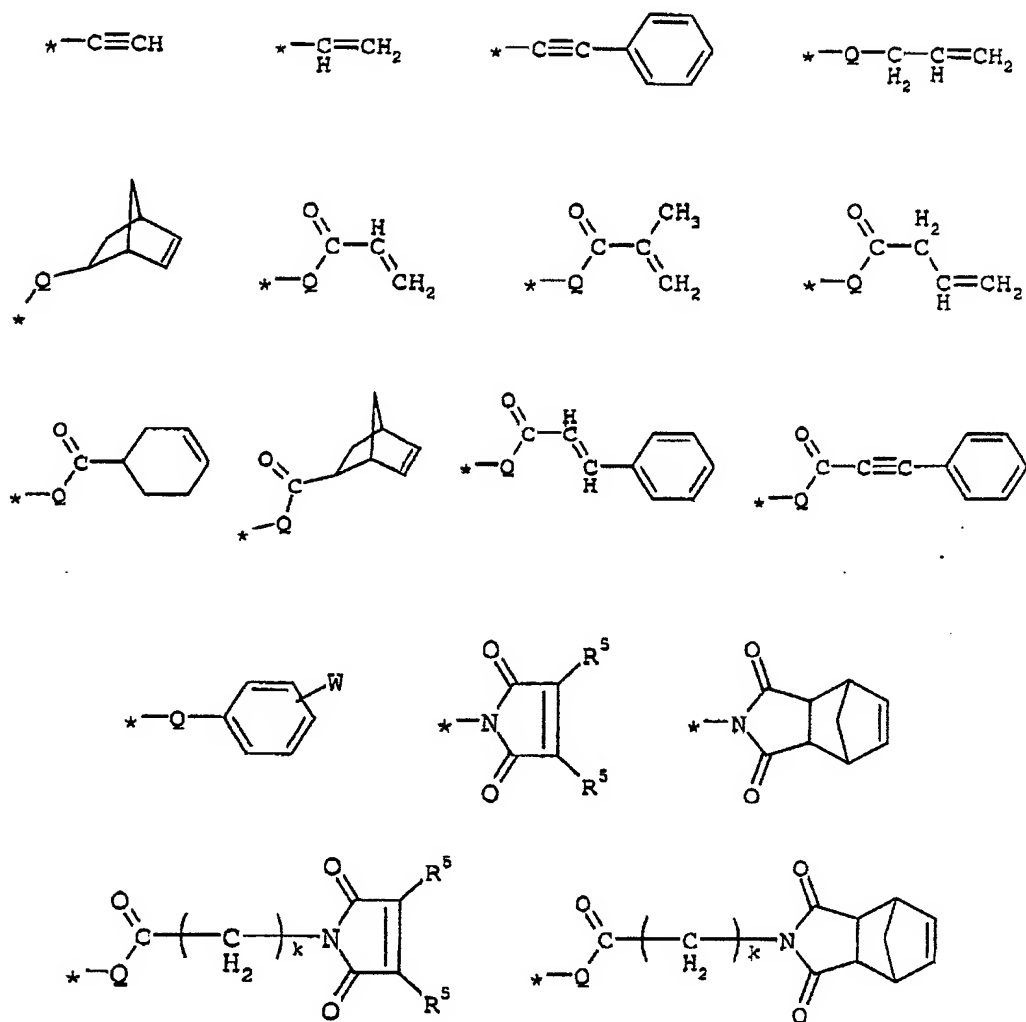
R<sup>2</sup> is a substituent selected from the group consisting of -H, an alkyl group having from 1 to 10 carbon atoms, an aryl group, and a heteroaryl group;

R<sup>3</sup> and R<sup>4</sup>, in each case independently, are substituents selected from the group consisting of a substituted alkylene, an unsubstituted alkylene, arylene, and cycloalkylene group;

R<sup>5</sup> is a substituent selected from the group consisting of

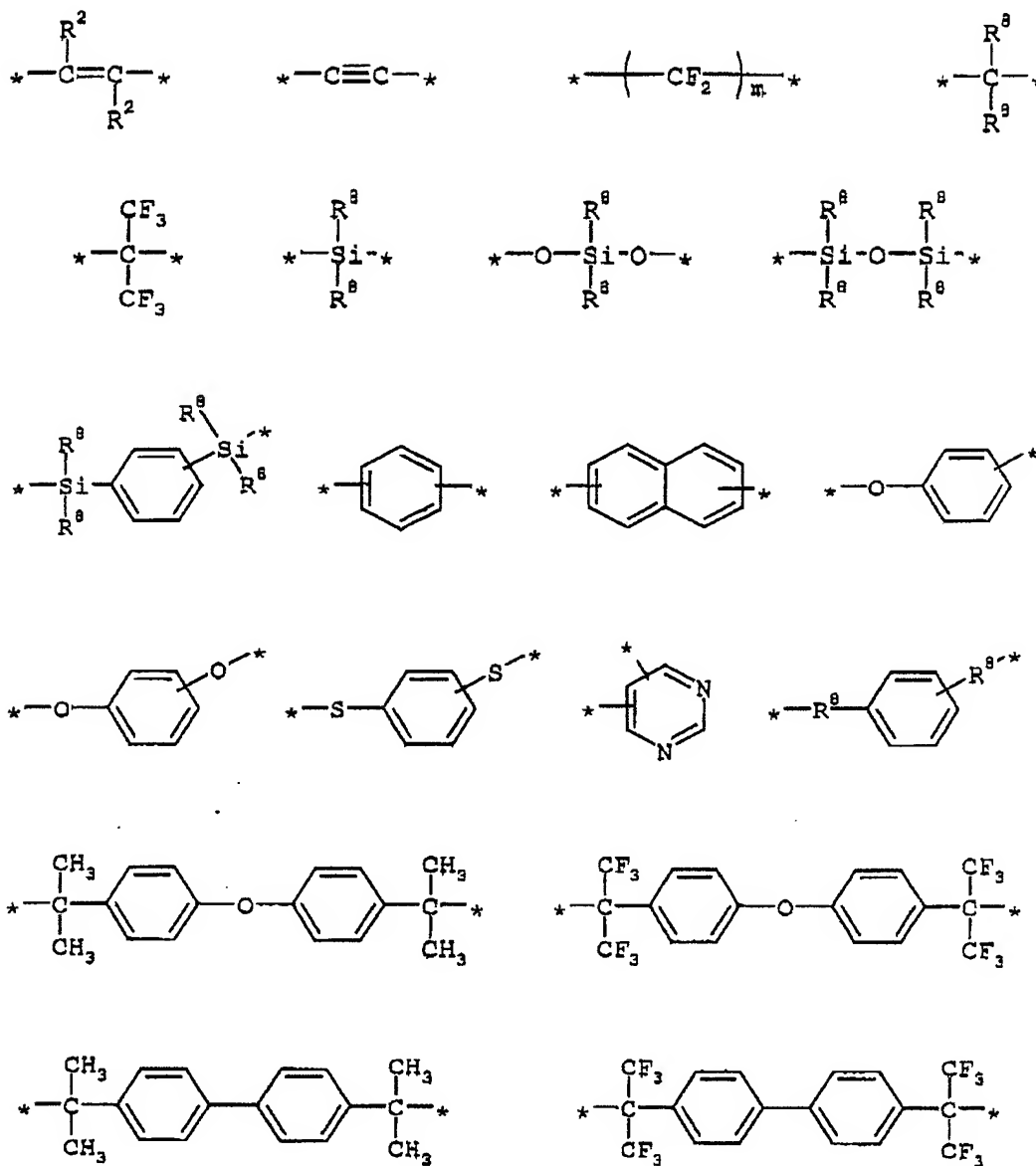


$R^6$  is a substituent selected from the group consisting of  $-H$ ,  $-CF_3$ ,  $-OH$ ,  $-SH$ ,  $-COOH$ ,  $-N(R^2)_2$ , an alkyl group, aryl group, a heteroaryl group, and



;

$R^7$  is a substituent selected from the group consisting of  $-O-$ ,  $-CO-$ ,  $-NR^4-$ ,  $-S-$ ,  $-SO_2-$ ,  $-CH_2-$ ,  $-S_2-$ , and



$\text{R}^a$  is a substituent selected from the group consisting of an alkyl group having from 1 to 10 carbon atoms, an aryl group, and a heteroaryl group;

$a$  is an integer from 0 to 1;

$b$  is an integer from 1 to 200;

c is an integer from 0 to 200;  
d is an integer from 0 to 50;  
e is an integer from 0 to 50;  
f is an integer from 0 to 1;  
g is an integer from 0 to 100;  
h is an integer from 0 to 100;  
i is an integer from 0 to 10;  
k is an integer from 0 to 10;  
l is an integer from 1 to 10;  
m is an integer from 1 to 10;

g and h are not simultaneously 0; and

l is an integer from 0 to 10 when  $R^7$  is  $-CH_2-$ .

2. The poly-o-hydroxyamide according to claim 1, wherein b is an integer from 5 to 100.

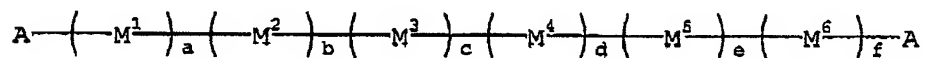
3. The poly-o-hydroxyamide according to claim 1, wherein c is an integer from 0 to 50.

4. The poly-o-hydroxyamide according to claim 1, wherein d is an integer from 0 to 20.

5. The poly-o-hydroxyamide according to claim 1, wherein e is an integer from 0 to 20.

6. The poly-o-hydroxyamide according to claim 1, wherein at least one of c, d, and e is not equal to zero.

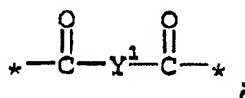
7. A polybenzoxazole obtained from a poly-o-hydroxyamide having a formula I



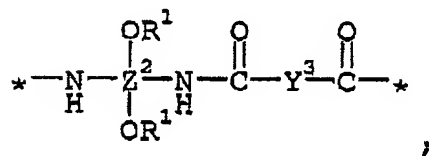
Formula I

wherein

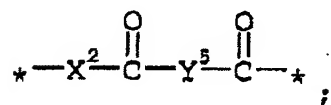
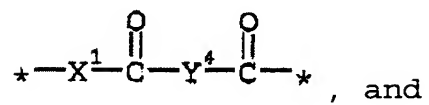
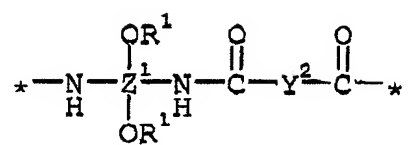
M<sup>1</sup> is



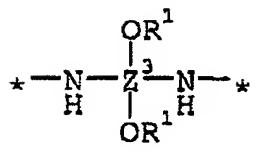
M<sup>2</sup> is



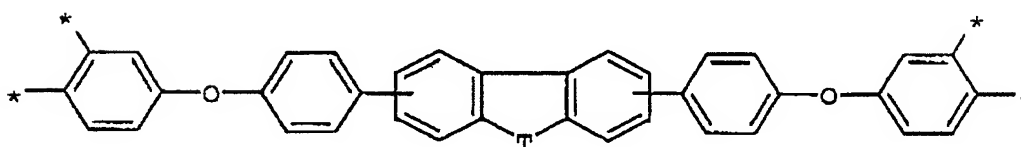
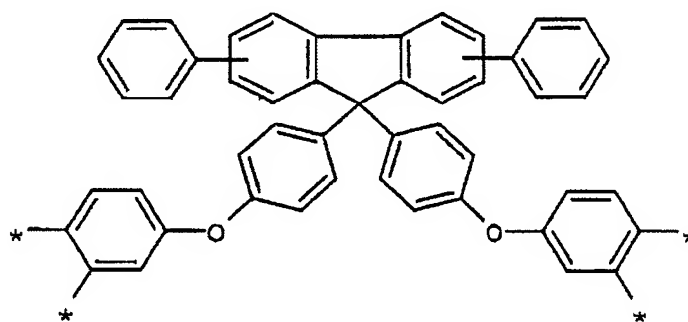
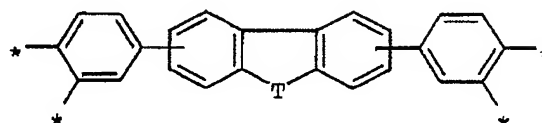
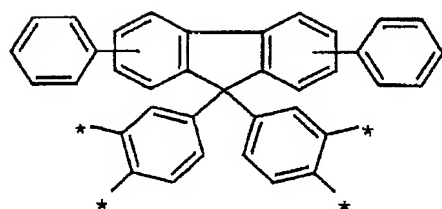
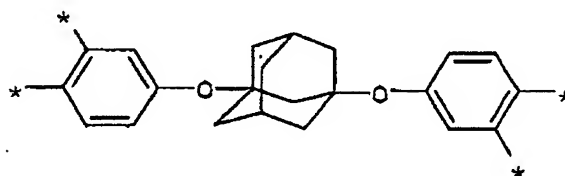
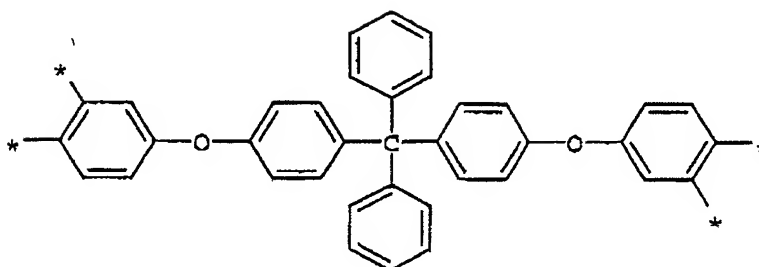
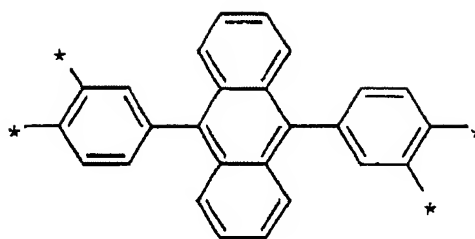
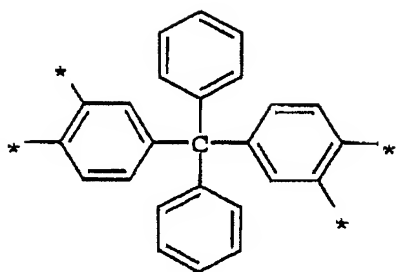
M<sup>3</sup>, M<sup>4</sup>, and M<sup>5</sup>, in each case independently, are monomers selected from the group consisting of



M<sup>6</sup> is



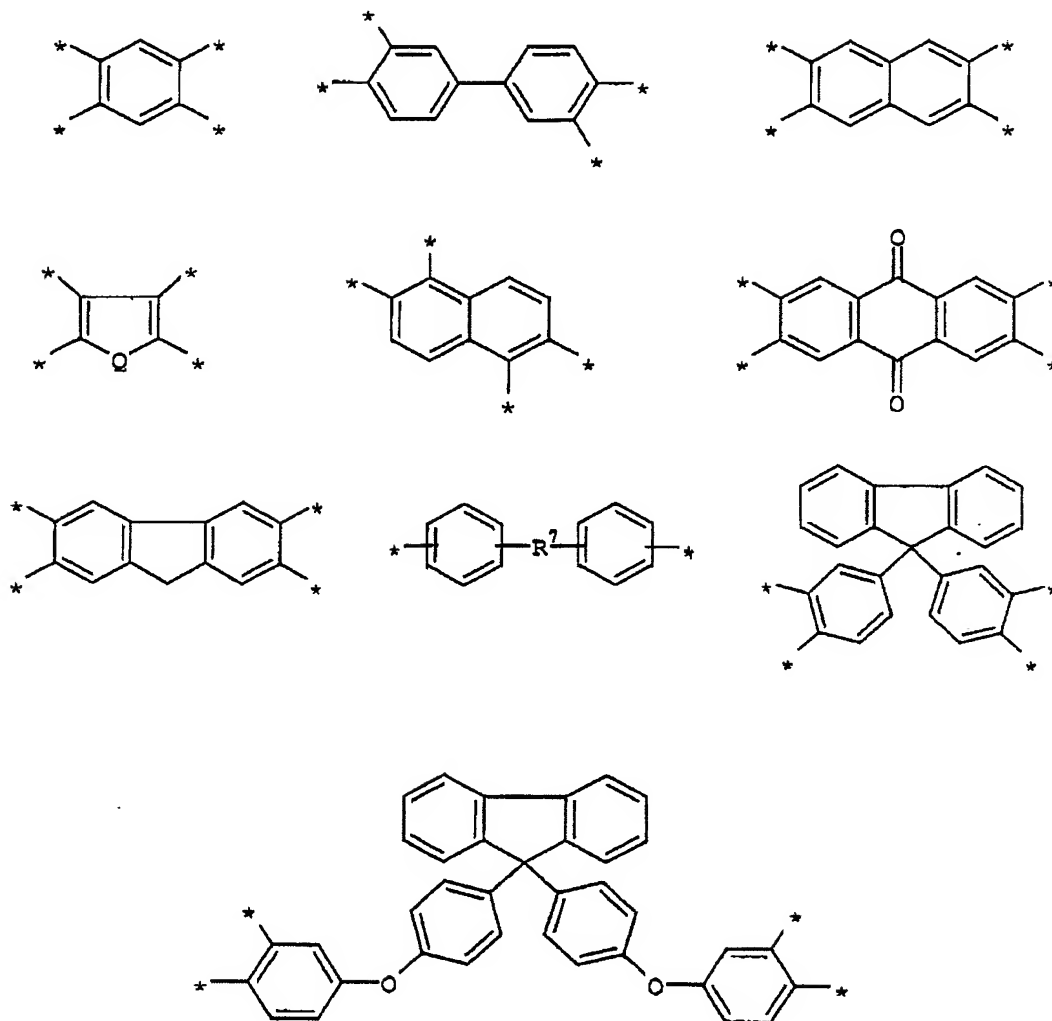
Z<sup>2</sup> is a substituent selected from the group consisting of



i

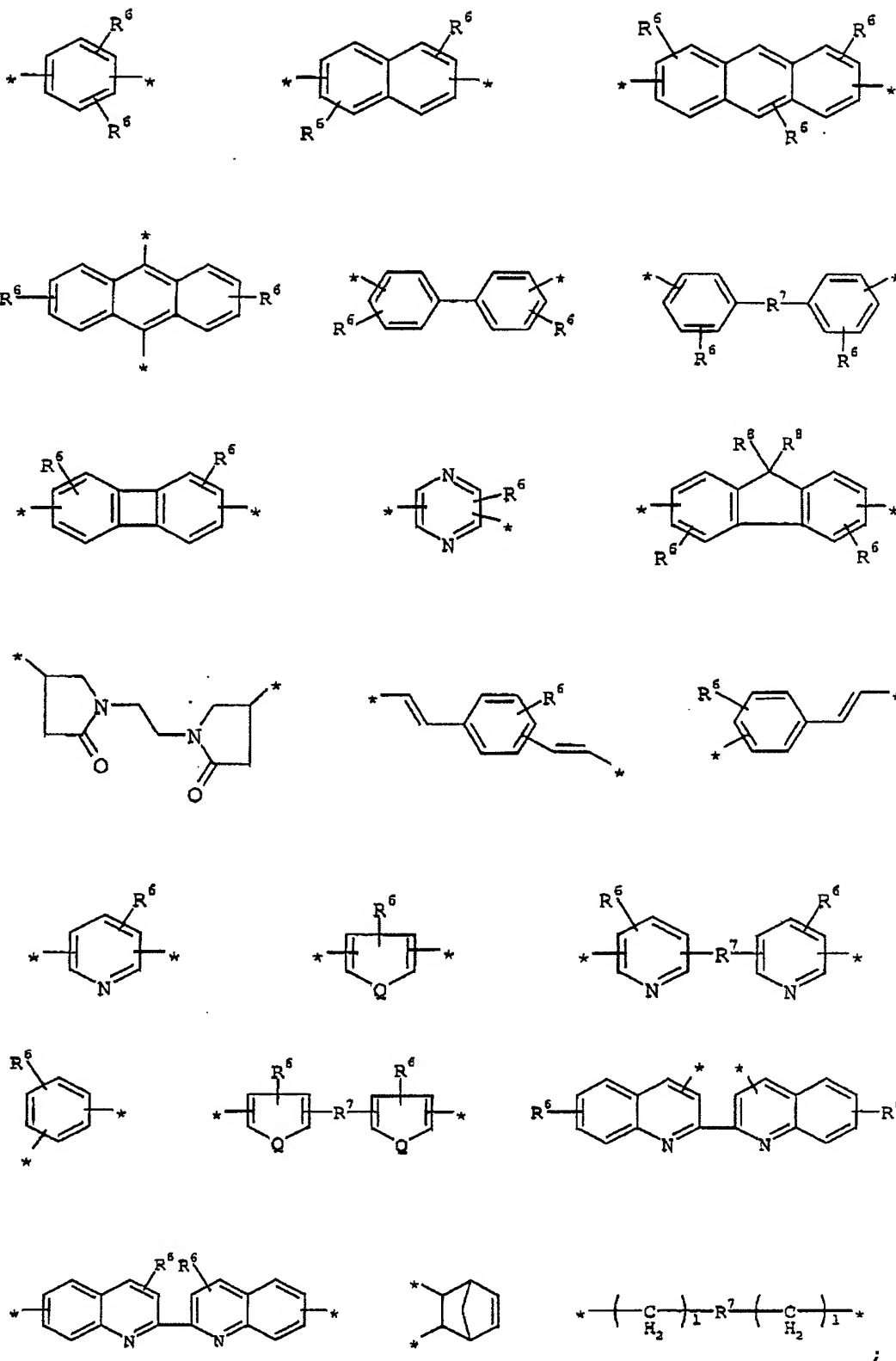


$Z^1$  and  $Z^3$ , in each case independently, are substituents selected from the group stated for  $Z^2$ , the group further consisting of

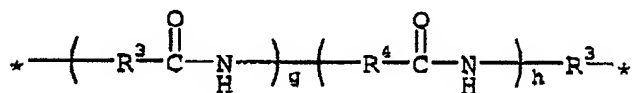
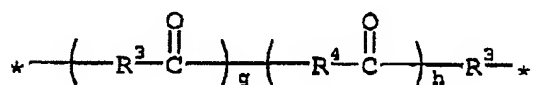
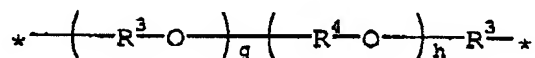
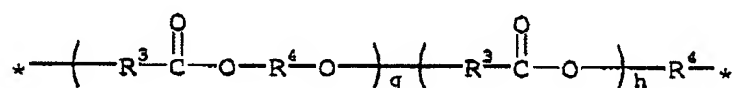
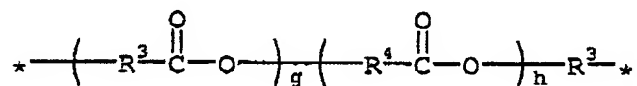
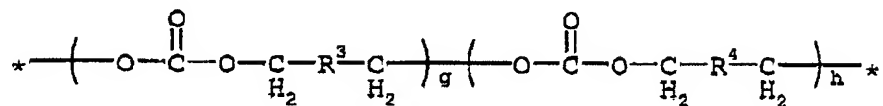


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$Y^1$ ,  $Y^2$ ,  $Y^3$ ,  $Y^4$ , and  $Y^5$  are substituents selected from the group consisting of

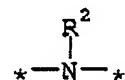
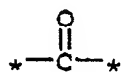
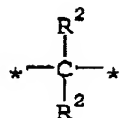


X<sup>1</sup> and X<sup>2</sup>, in each case independently, are substituents selected from the group consisting of:



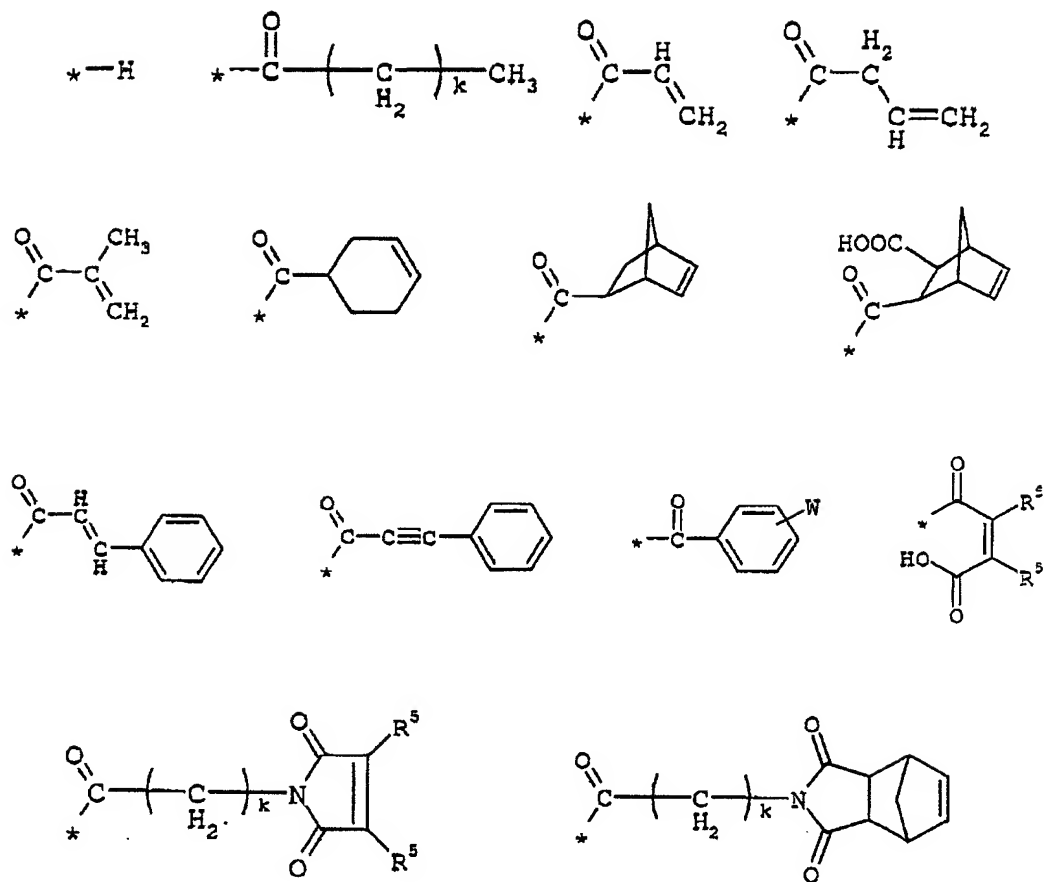
;

T is a substituent selected from the group consisting of

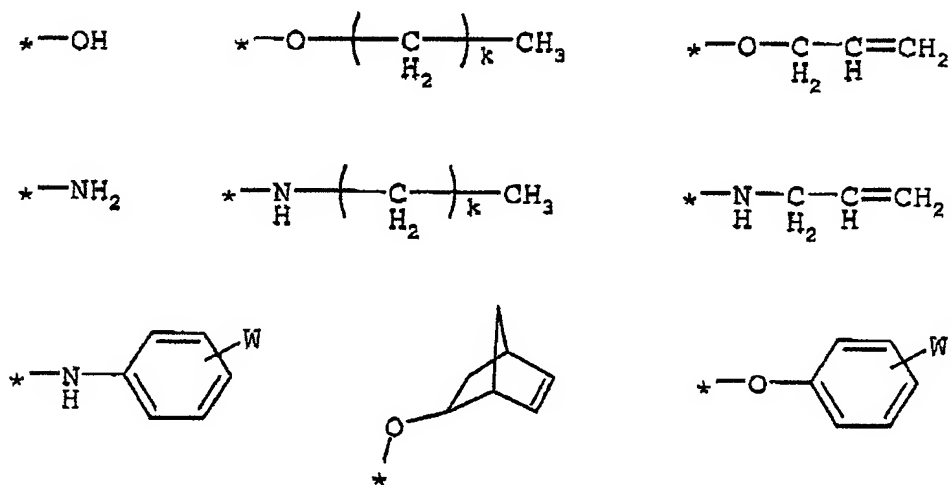


;

A, if at least one of a = 0 and f = 1, is a substituent selected from the group consisting of

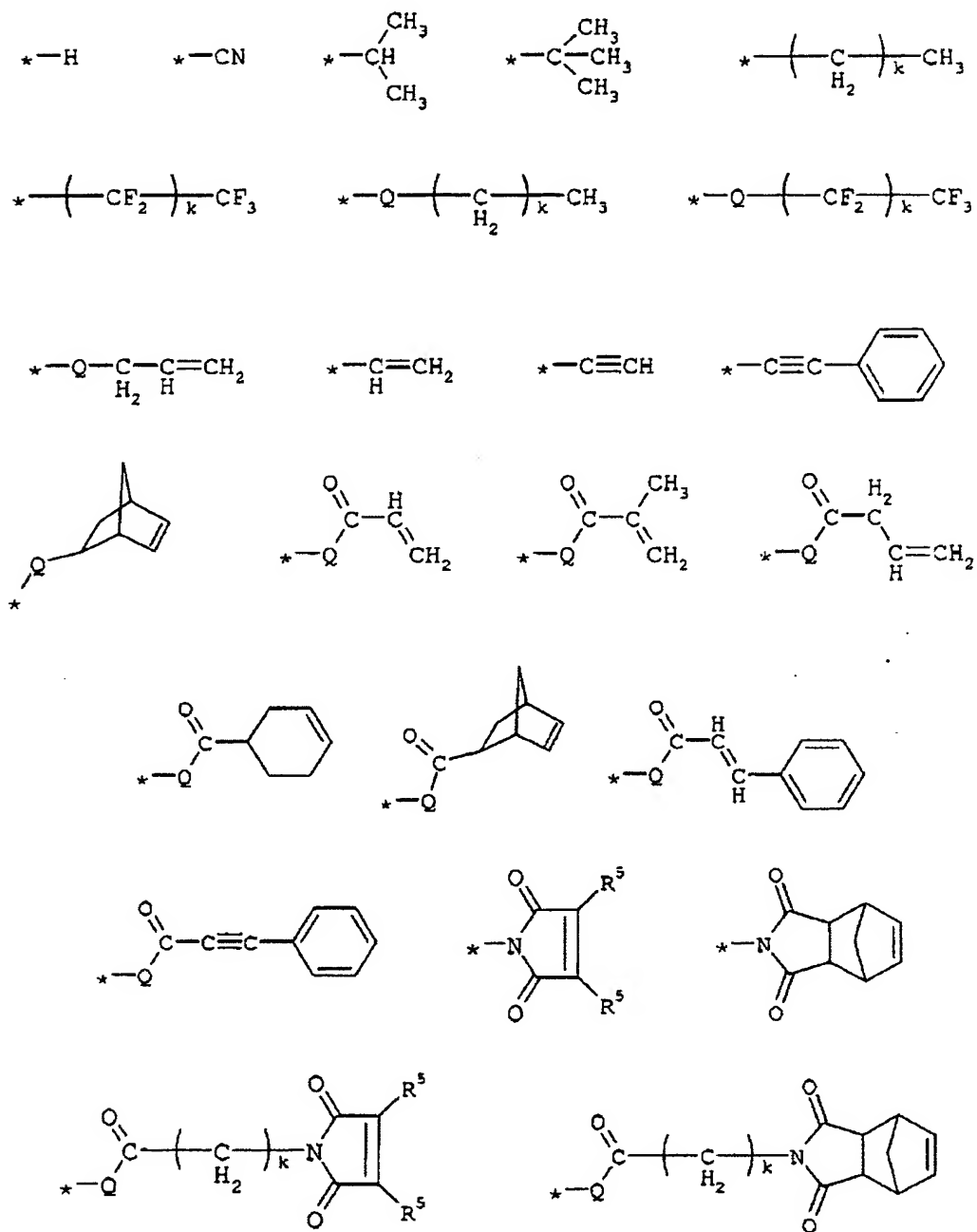


A, if at least one of a = 1 and f = 0, is a substituent selected from the group consisting of

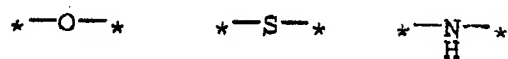


i

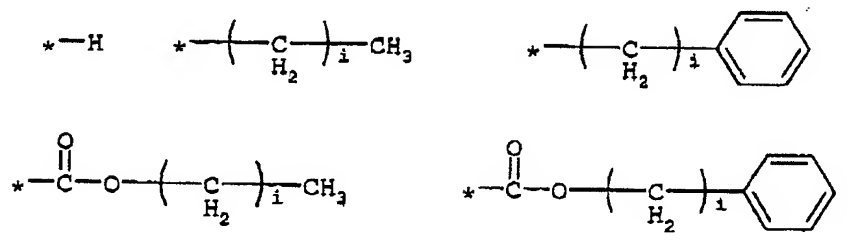
W is a substituent selected from the group consisting of



Q is a substituent selected from the group consisting of



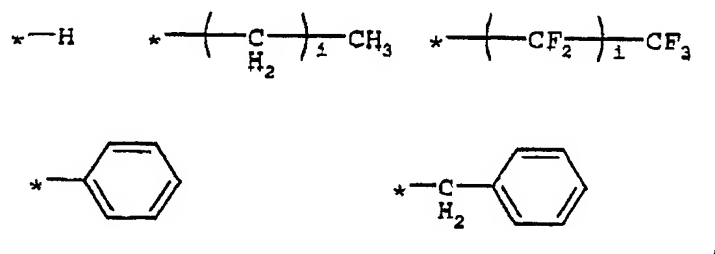
R<sup>1</sup> is a substituent selected from the group consisting of



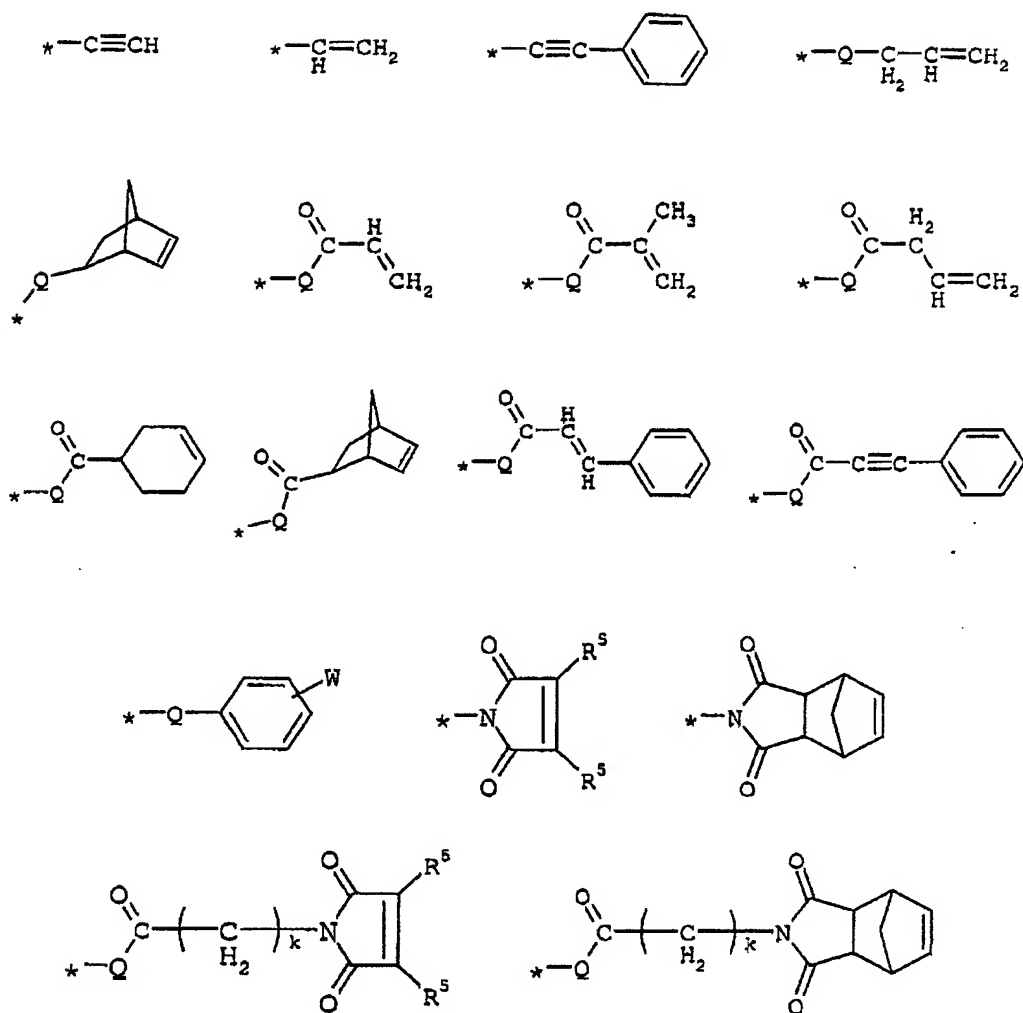
R<sup>2</sup> is a substituent selected from the group consisting of -H, an alkyl group having from 1 to 10 carbon atoms, an aryl group, and a heteroaryl group;

R<sup>3</sup> and R<sup>4</sup>, in each case independently, are substituents selected from the group consisting of a substituted alkylene, an unsubstituted alkylene, arylene, and cycloalkylene group;

R<sup>5</sup> is a substituent selected from the group consisting of

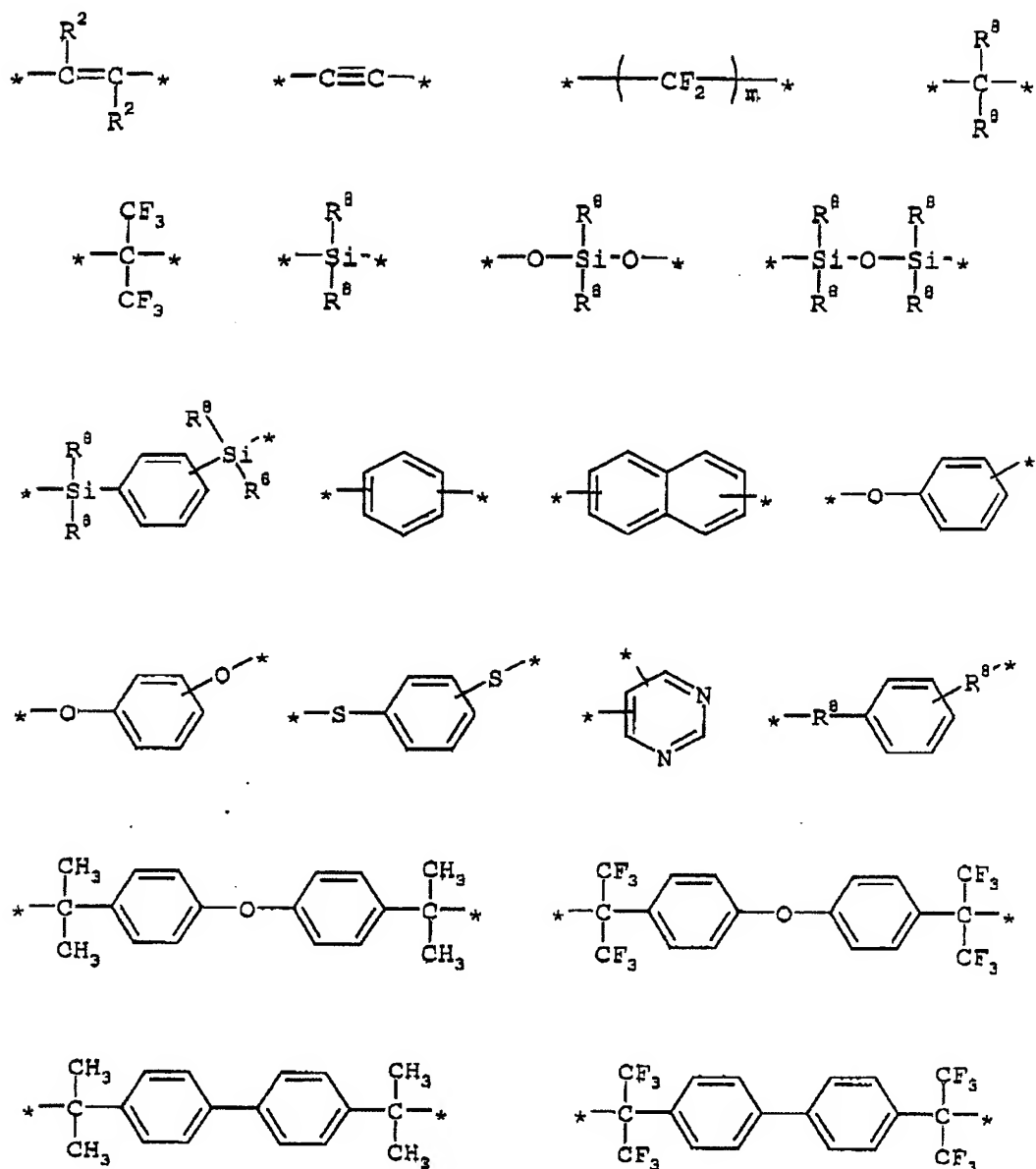


$R^6$  is a substituent selected from the group consisting of  $-H$ ,  $-CF_3$ ,  $-OH$ ,  $-SH$ ,  $-COOH$ ,  $-N(R^2)_2$ , an alkyl group, aryl group, a heteroaryl group, and



;

$R^7$  is a substituent selected from the group consisting of  $-O-$ ,  $-CO-$ ,  $-NR^4-$ ,  $-S-$ ,  $-SO_2-$ ,  $-CH_2-$ ,  $-S_2-$ , and



$\text{R}^a$  is a substituent selected from the group consisting of an alkyl group having from 1 to 10 carbon atoms, an aryl group, and a heteroaryl group;

a is an integer from 0 to 1;

b is an integer from 1 to 200;



c is an integer from 0 to 200;

d is an integer from 0 to 50;

e is an integer from 0 to 50;

f is an integer from 0 to 1;

g is an integer from 0 to 100;

h is an integer from 0 to 100;

i is an integer from 0 to 10;

k is an integer from 0 to 10;

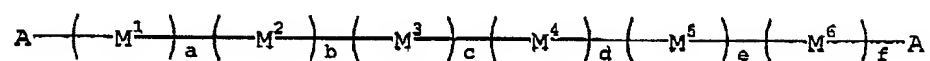
l is an integer from 1 to 10;

m is an integer from 1 to 10;

g and h are not simultaneously 0; and

l is an integer from 0 to 10 when R<sup>7</sup> is -CH<sub>2</sub>-.

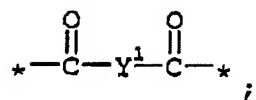
8. A process for preparing a poly-o-hydroxyamide having a formula I



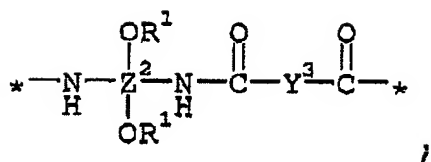
Formula I

wherein

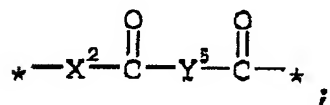
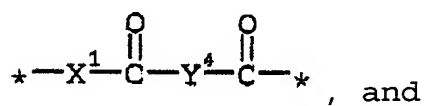
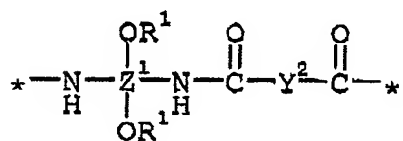
M<sup>1</sup> is



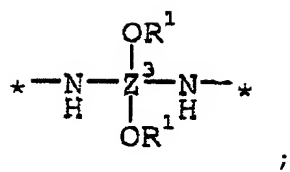
M<sup>2</sup> is



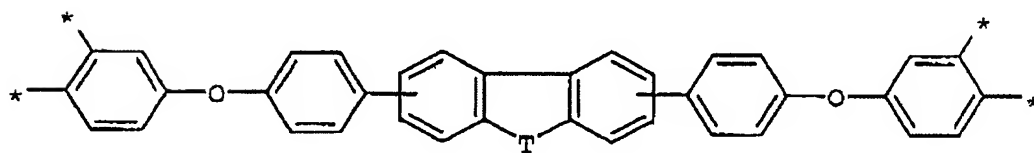
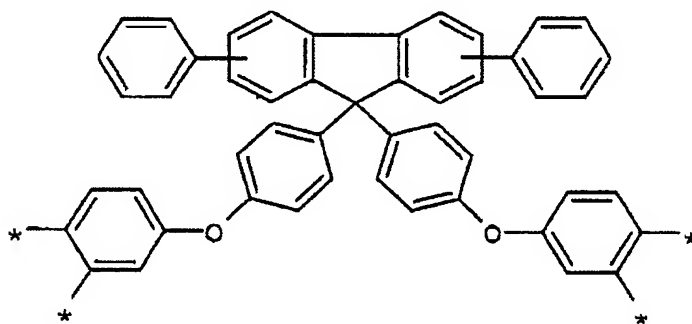
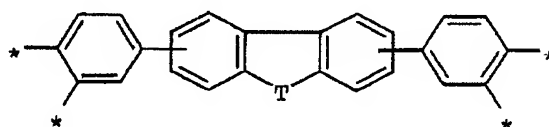
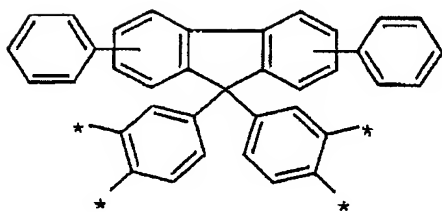
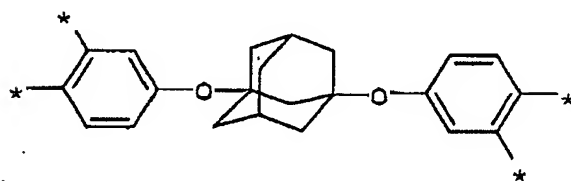
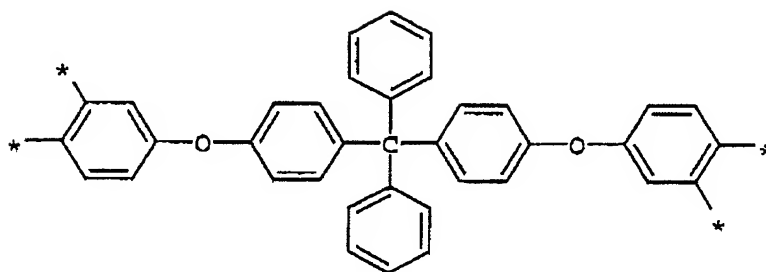
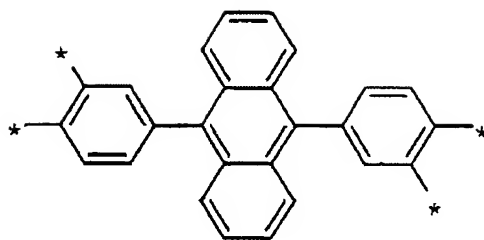
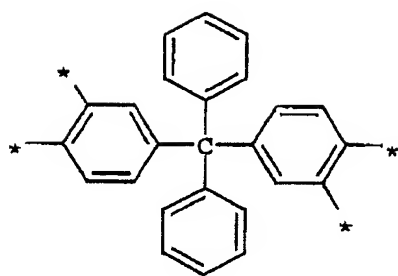
M<sup>3</sup>, M<sup>4</sup>, and M<sup>5</sup>, in each case independently, are monomers selected from the group consisting of



M<sup>6</sup> is

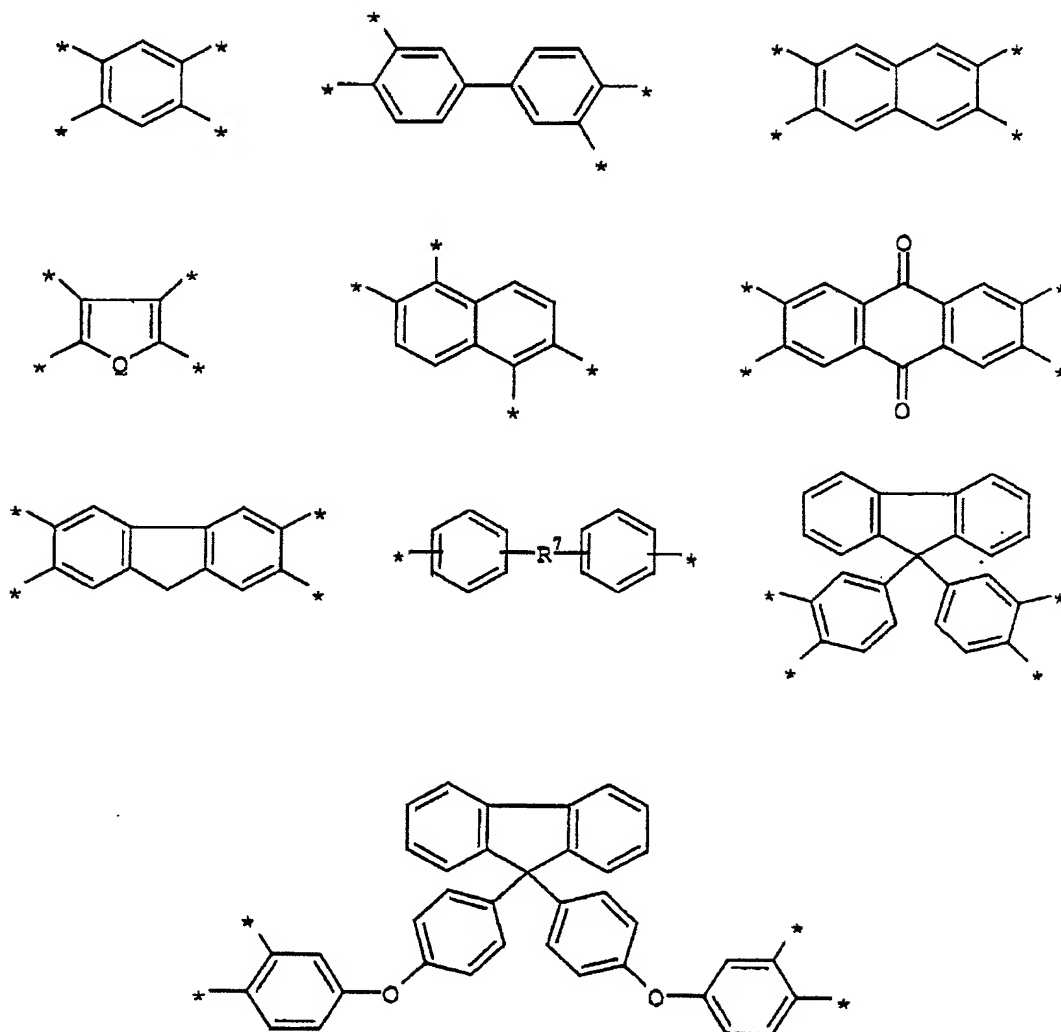


Z<sup>2</sup> is a substituent selected from the group consisting of



i

$Z^1$  and  $Z^3$ , in each case independently, are substituents selected from the group stated for  $Z^2$ , the group further consisting of

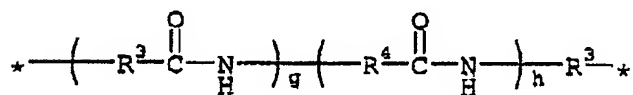
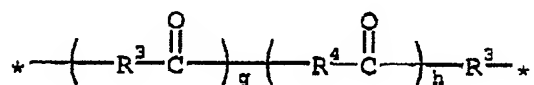
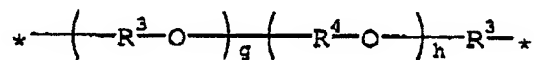
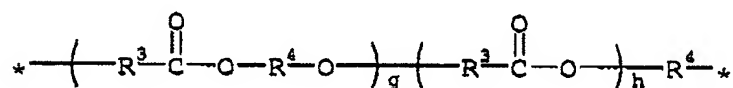
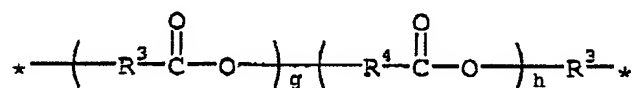
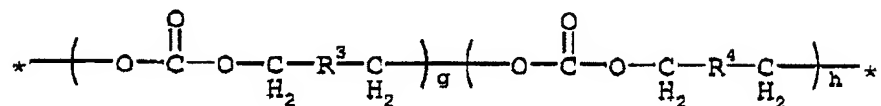


;

$Y^1$ ,  $Y^2$ ,  $Y^3$ ,  $Y^4$ , and  $Y^5$  are substituents selected from the group consisting of

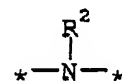
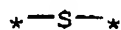
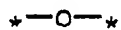
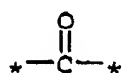
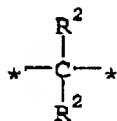


$X^1$  and  $X^2$ , in each case independently, are substituents selected from the group consisting of:



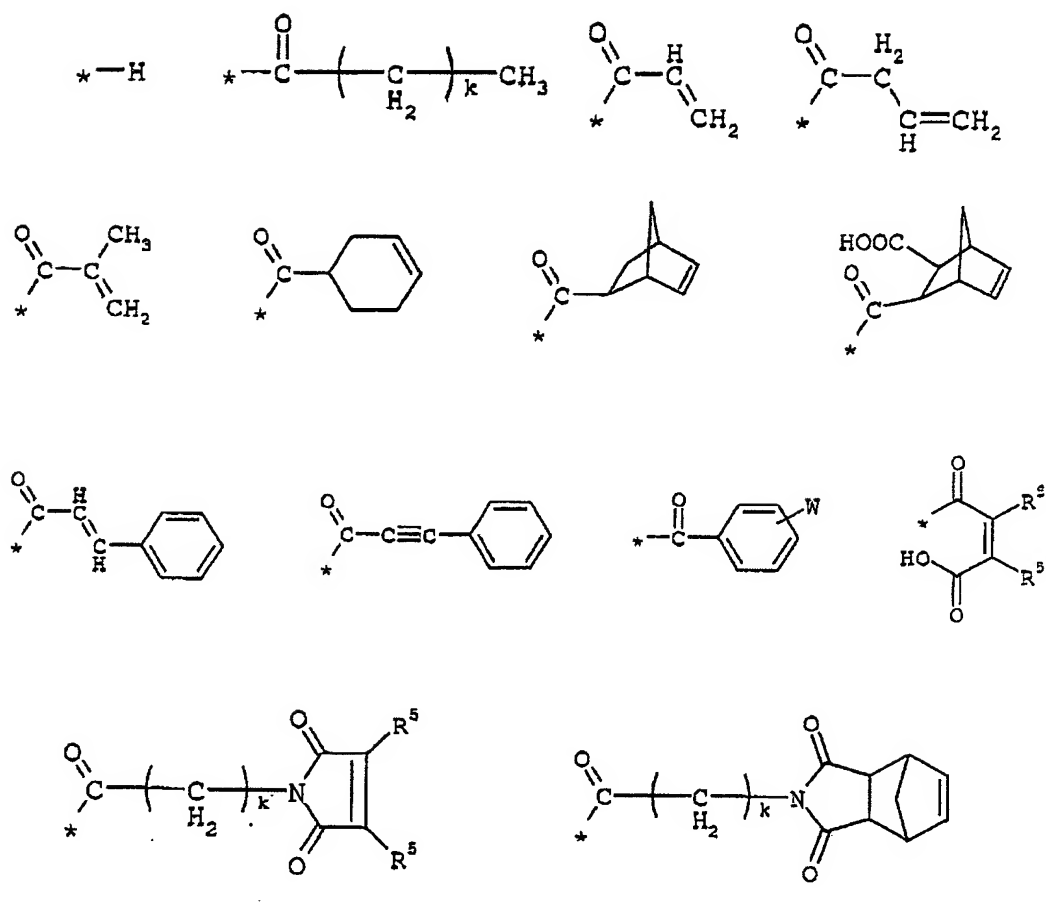
;

T is a substituent selected from the group consisting of



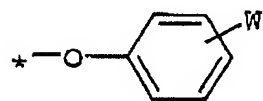
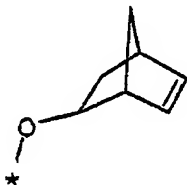
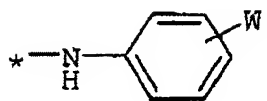
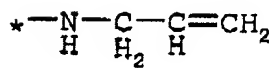
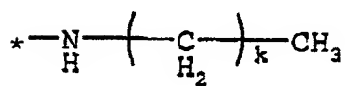
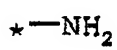
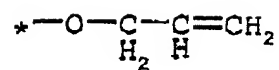
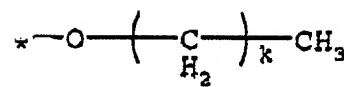
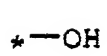
;

A, if at least one of  $a = 0$  and  $f = 1$ , is a substituent selected from the group consisting of



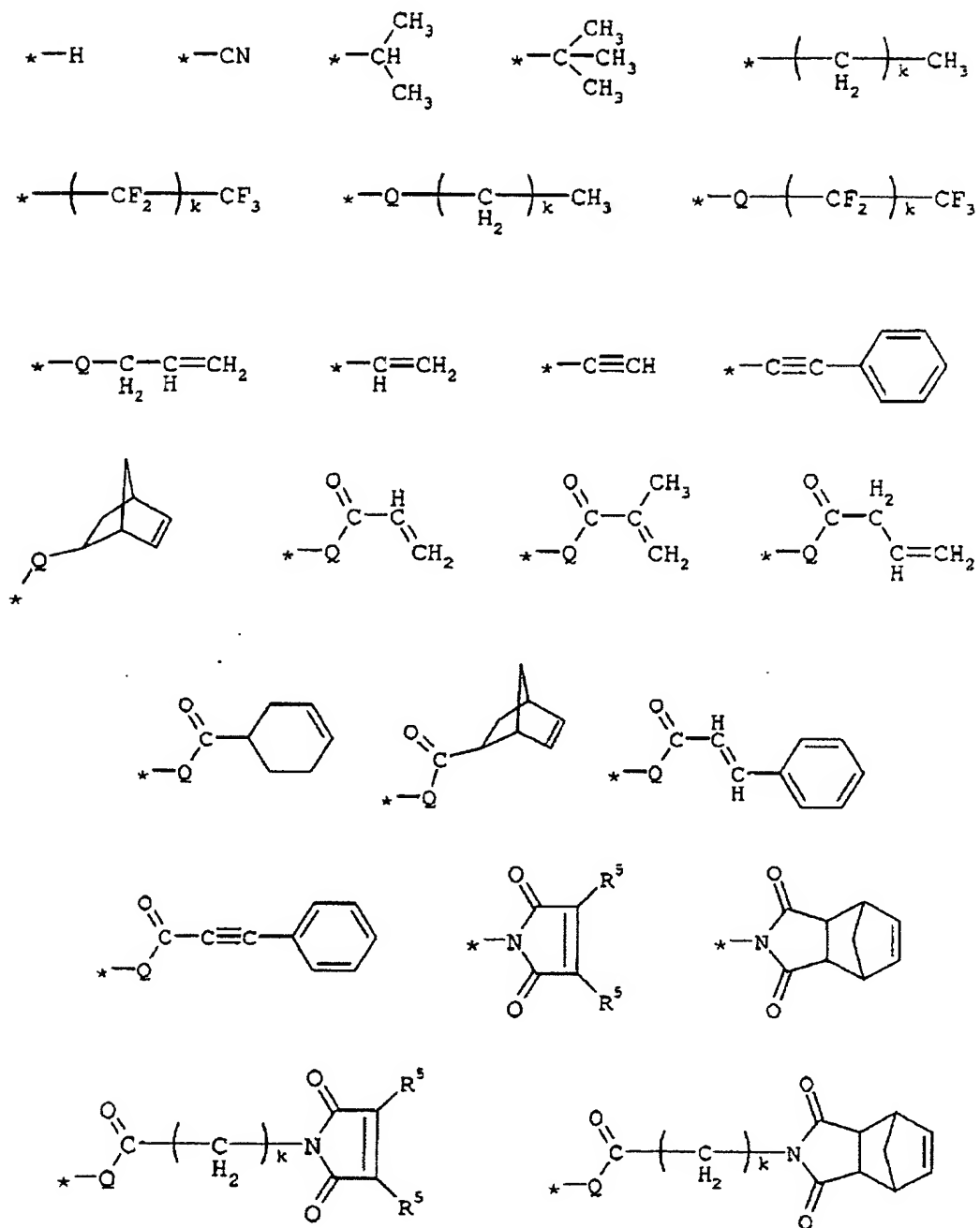
A, if at least one of a = 1 and f = 0, is a substituent selected from the group consisting of



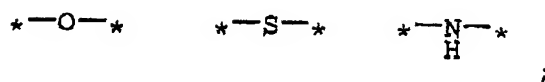


;

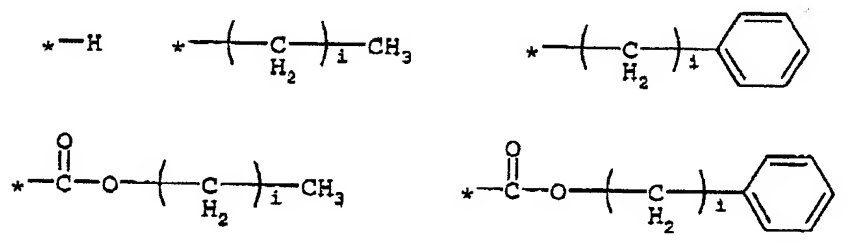
W is a substituent selected from the group consisting of



Q is a substituent selected from the group consisting of



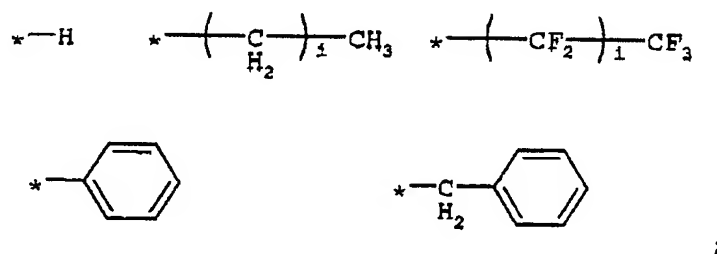
R<sup>1</sup> is a substituent selected from the group consisting of



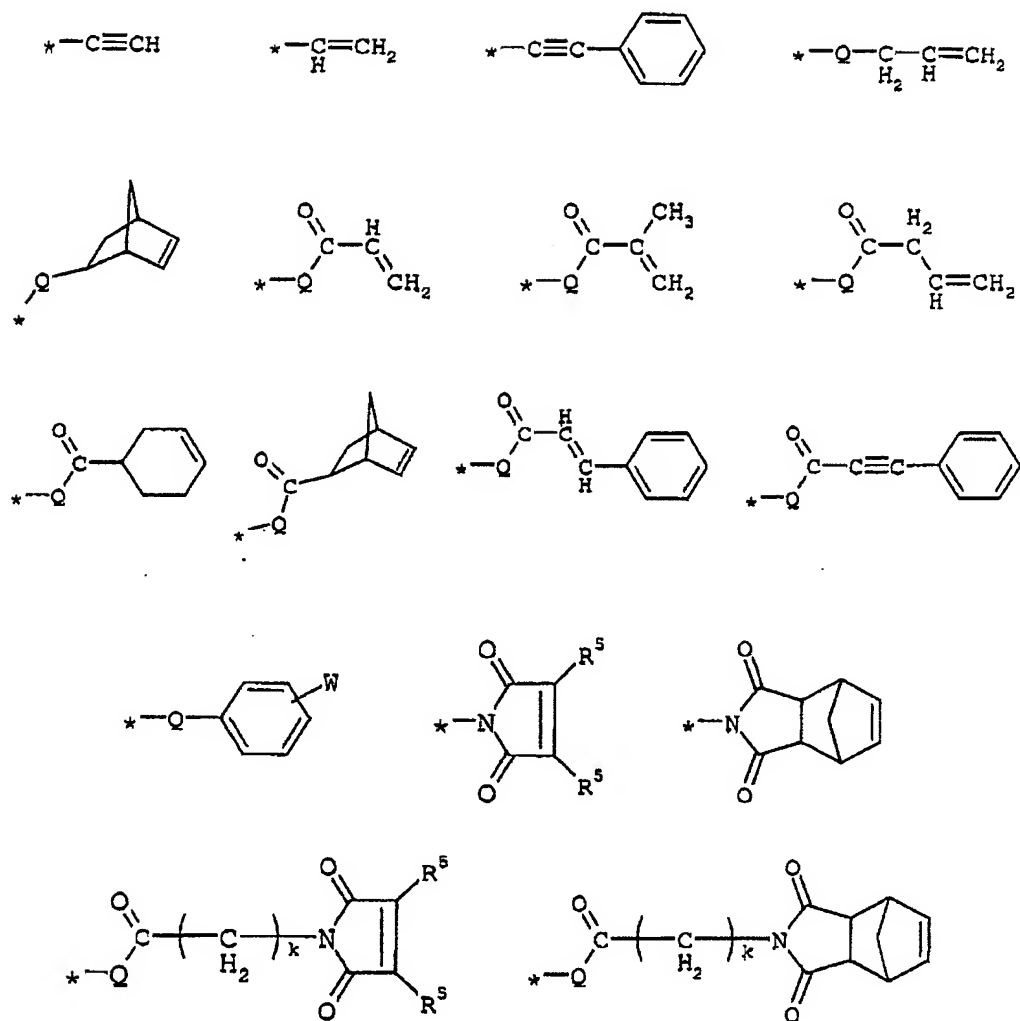
R<sup>2</sup> is a substituent selected from the group consisting of -H, an alkyl group having from 1 to 10 carbon atoms, an aryl group, and a heteroaryl group;

R<sup>3</sup> and R<sup>4</sup>, in each case independently, are substituents selected from the group consisting of a substituted alkylene, an unsubstituted alkylene, arylene, and cycloalkylene group;

R<sup>5</sup> is a substituent selected from the group consisting of

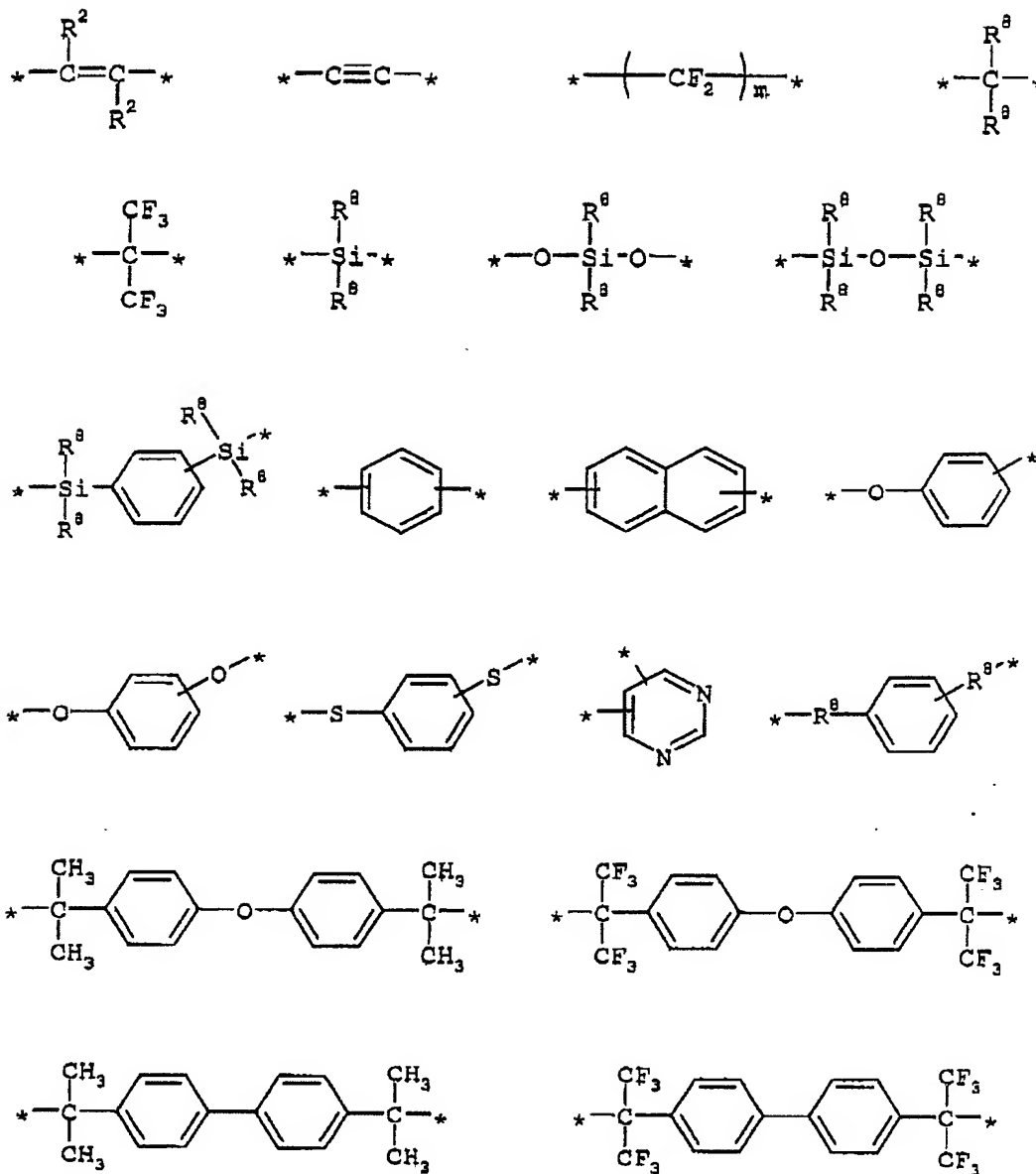


$R^6$  is a substituent selected from the group consisting of  $-H$ ,  $-CF_3$ ,  $-OH$ ,  $-SH$ ,  $-COOH$ ,  $-N(R^2)_2$ , an alkyl group, aryl group, a heteroaryl group, and



;

$R^7$  is a substituent selected from the group consisting of  $-O-$ ,  $-CO-$ ,  $-NR^4-$ ,  $-S-$ ,  $-SO_2-$ ,  $-CH_2-$ ,  $-S_2-$ , and



;

R<sup>a</sup> is a substituent selected from the group consisting of an alkyl group having from 1 to 10 carbon atoms, an aryl group, and a heteroaryl group;

a is an integer from 0 to 1;

b is an integer from 1 to 200;

c is an integer from 0 to 200;

d is an integer from 0 to 50;

e is an integer from 0 to 50;

f is an integer from 0 to 1;

g is an integer from 0 to 100;

h is an integer from 0 to 100;

i is an integer from 0 to 10;

k is an integer from 0 to 10;

l is an integer from 1 to 10;

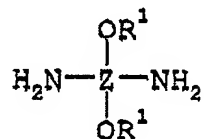
m is an integer from 1 to 10;

g and h are not simultaneously 0; and

l is an integer from 0 to 10 when  $R^7$  is  $-\text{CH}_2-$ ;

the method which comprises:

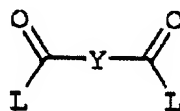
reacting a monomer having a formula II



Formula II,

Z corresponding to one of  $Z^1$ ,  $Z^2$ , and  $Z^3$ ,

with at least one of a dicarboxylic acid and an activated dicarboxylic acid derivative having a formula III



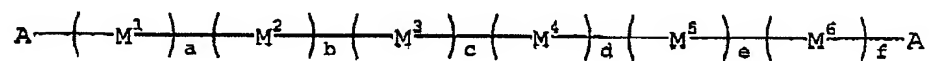
Formula III,

L being a substituent selected from the group consisting of a hydroxyl group and an activating group;

Y being one of Y<sup>1</sup>, Y<sup>2</sup>, Y<sup>3</sup>, Y<sup>4</sup>, and Y<sup>5</sup>.

9. The process according to claim 8, which further comprises including a base during the reacting step.

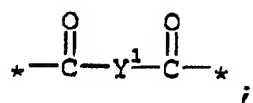
10. A process for preparing a polybenzoxazole, which comprises heating a poly-o-hydroxyamide having a formula I



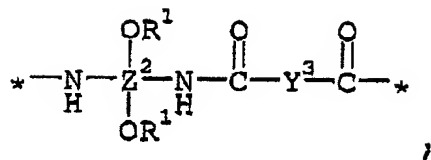
Formula I

wherein

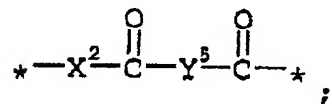
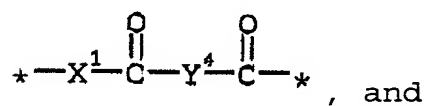
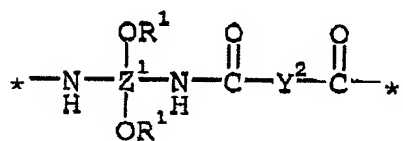
M<sup>1</sup> is



M<sup>2</sup> is

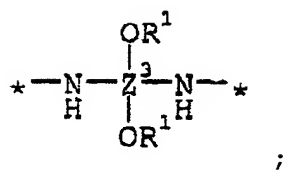


M<sup>3</sup>, M<sup>4</sup>, and M<sup>5</sup>, in each case independently, are monomers selected from the group consisting of

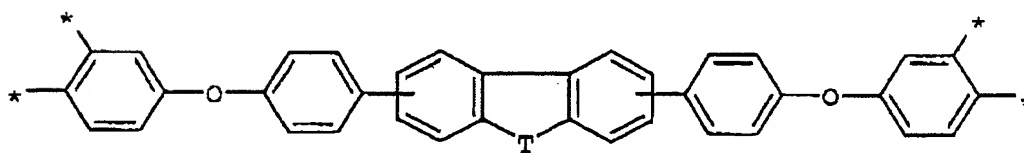
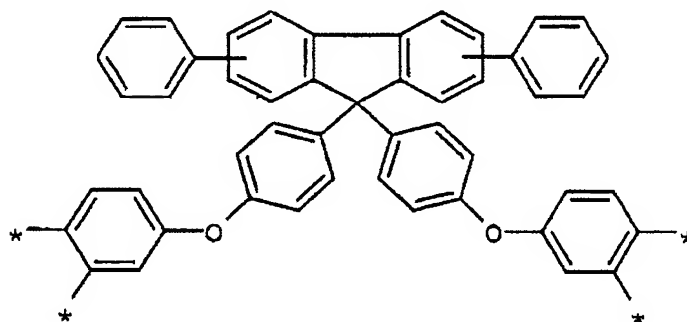
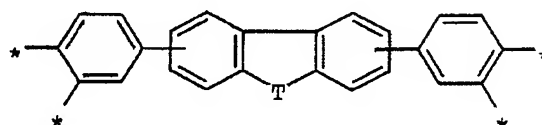
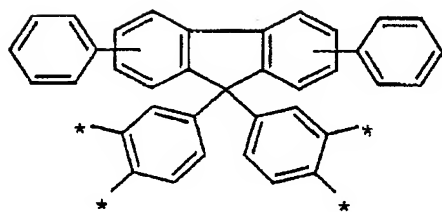
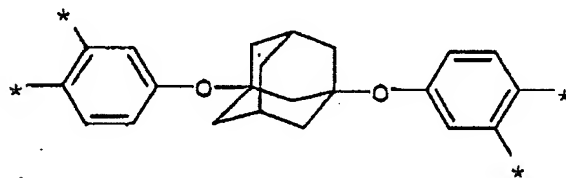
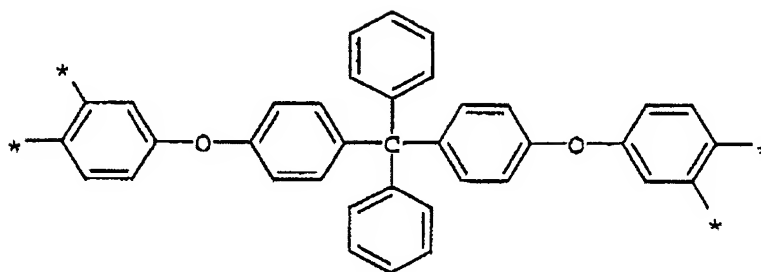
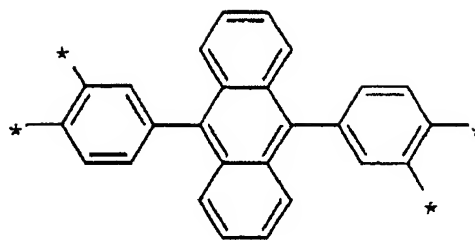
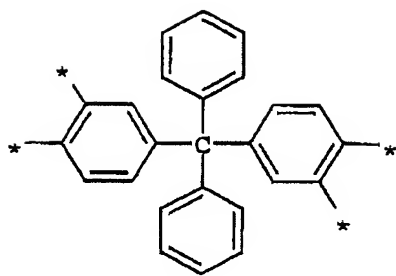


M<sup>6</sup> is



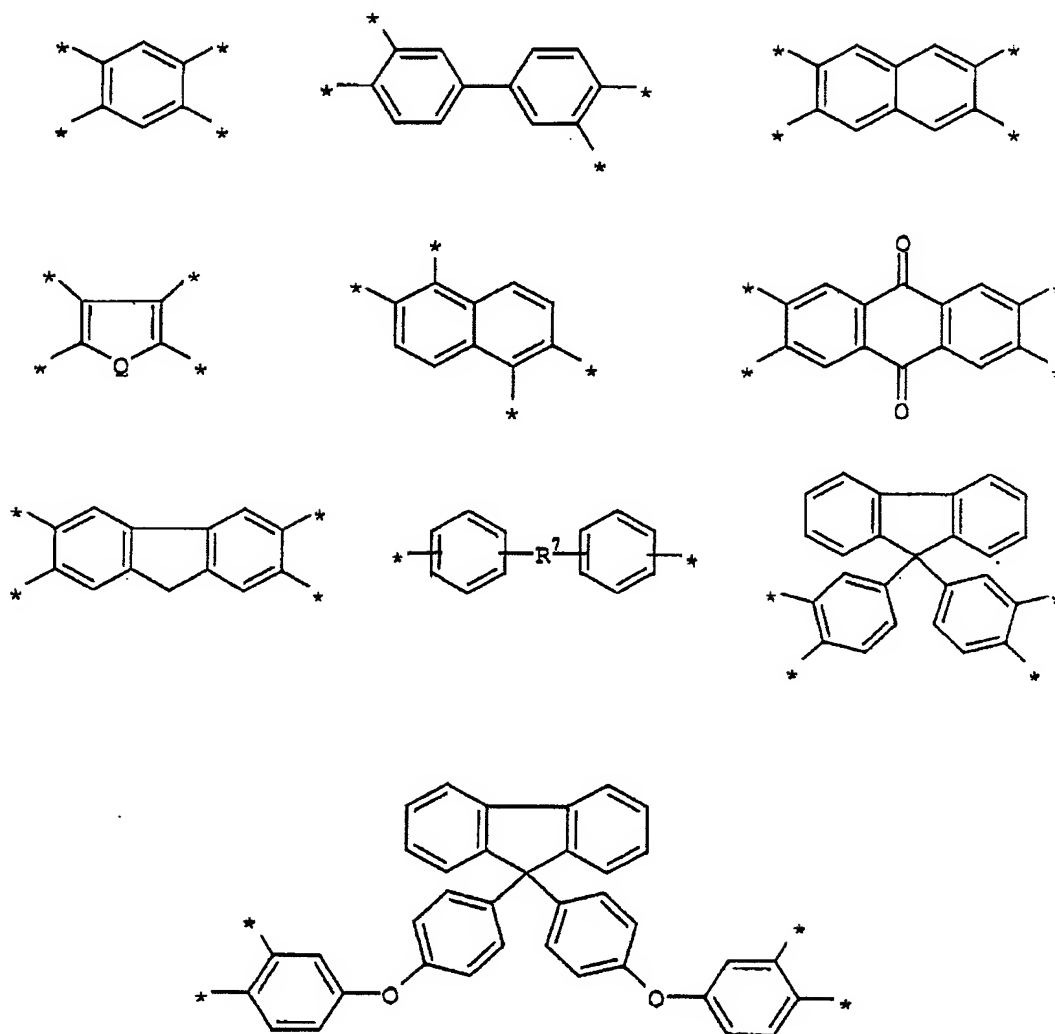


$\text{Z}^2$  is a substituent selected from the group consisting of



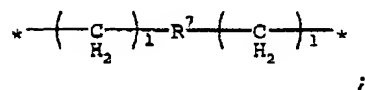
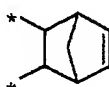
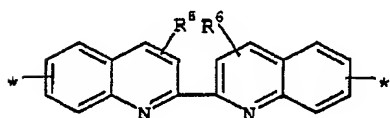
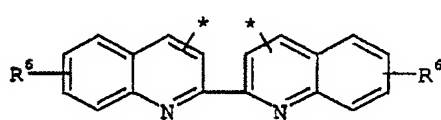
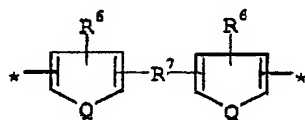
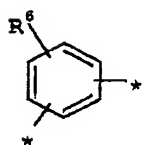
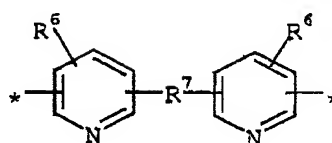
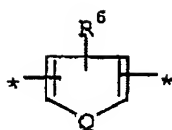
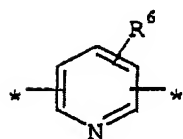
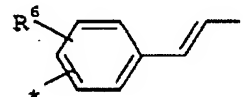
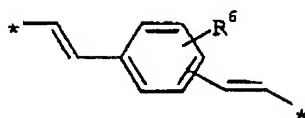
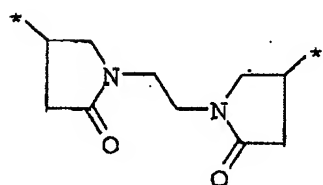
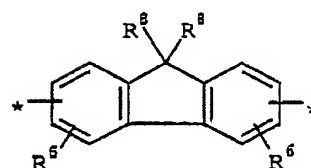
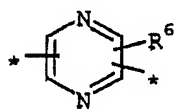
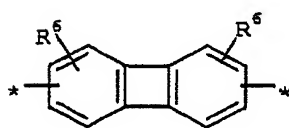
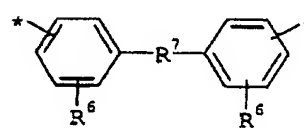
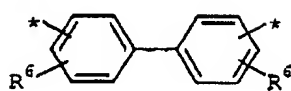
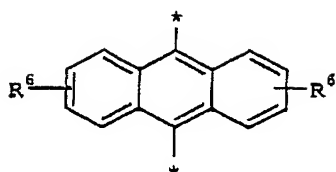
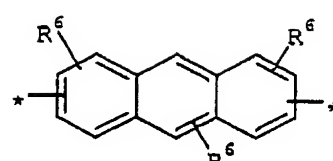
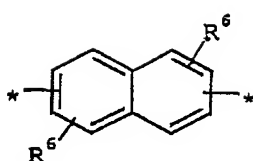
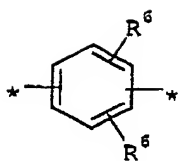
i

$Z^1$  and  $Z^3$ , in each case independently, are substituents selected from the group stated for  $Z^2$ , the group further consisting of

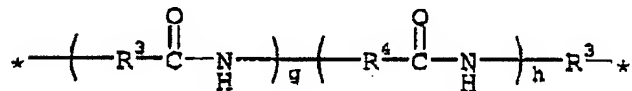
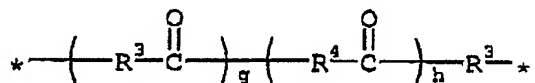
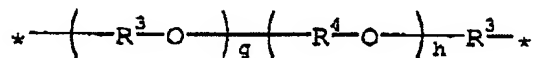
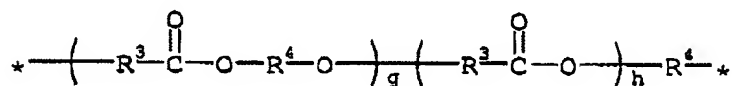
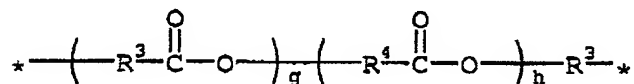
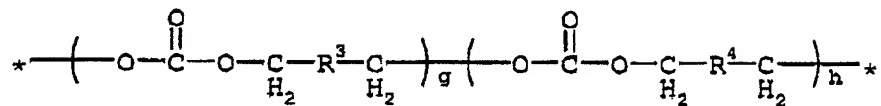


;

$Y^1$ ,  $Y^2$ ,  $Y^3$ ,  $Y^4$ , and  $Y^5$  are substituents selected from the group consisting of

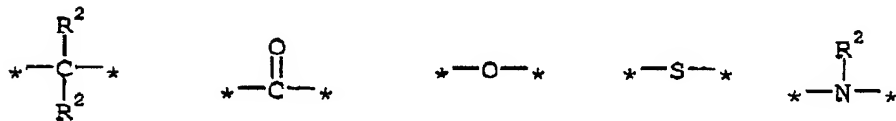


$X^1$  and  $X^2$ , in each case independently, are substituents selected from the group consisting of:



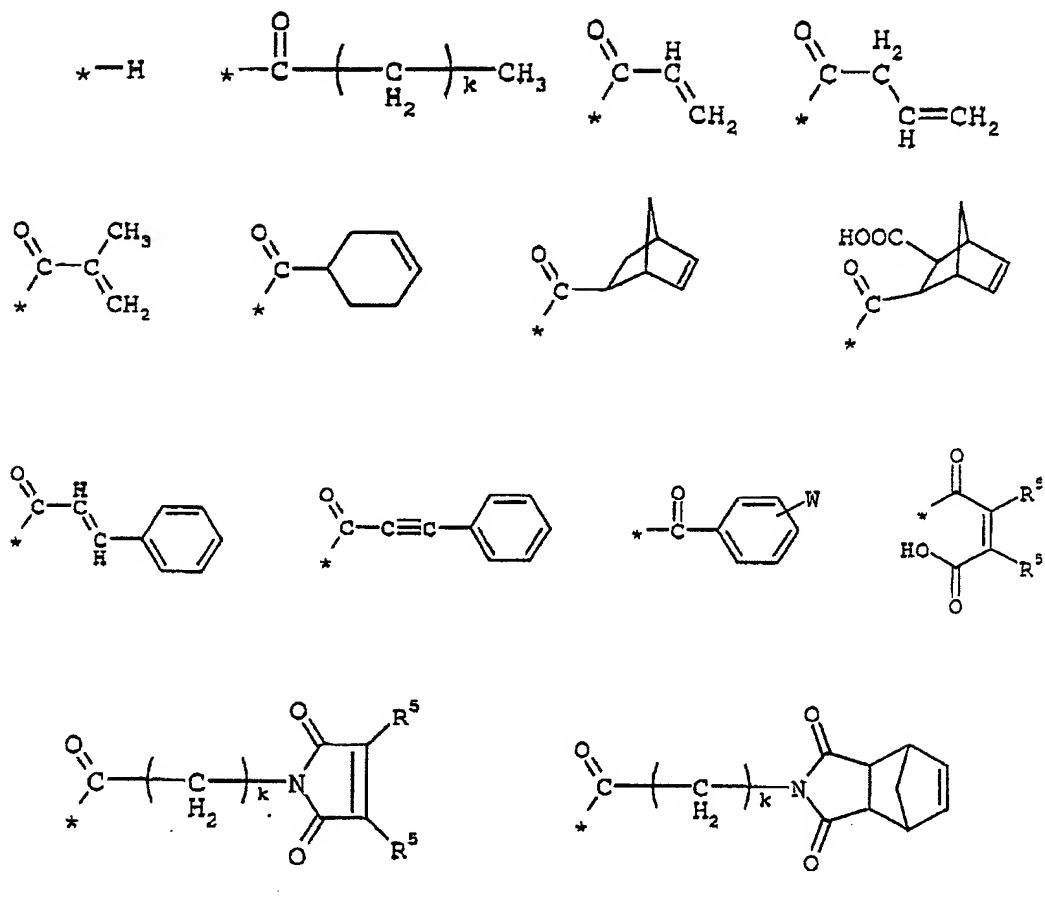
;

T is a substituent selected from the group consisting of

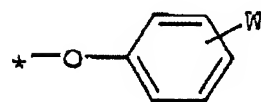
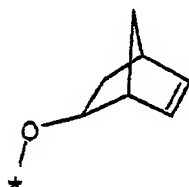
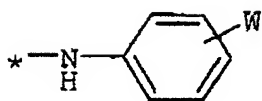
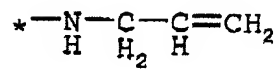
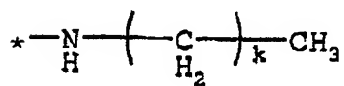
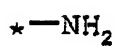
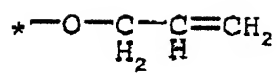
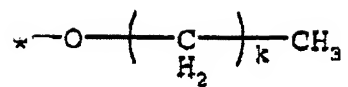
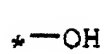


;

A, if at least one of  $a = 0$  and  $f = 1$ , is a substituent selected from the group consisting of

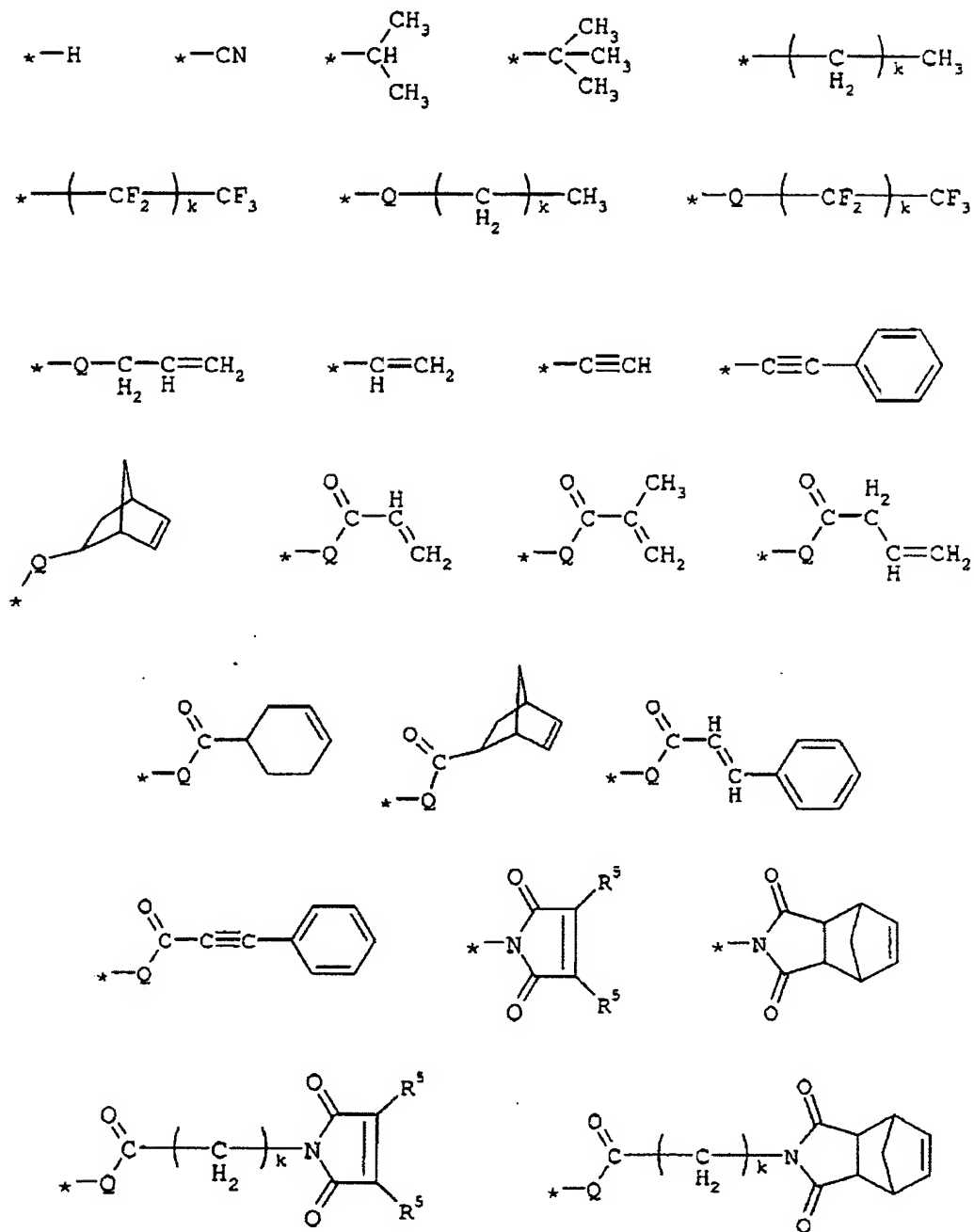


A, if at least one of  $a = 1$  and  $f = 0$ , is a substituent selected from the group consisting of



;

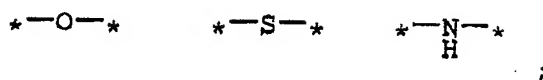
W is a substituent selected from the group consisting of



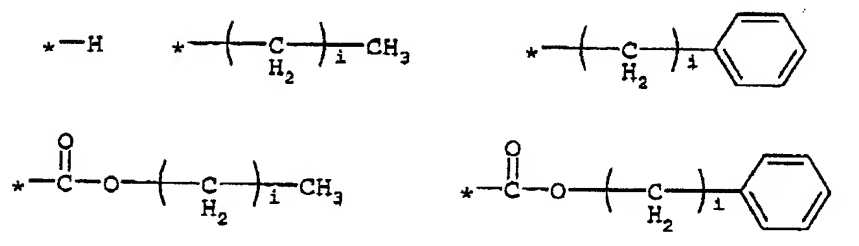
;



Q is a substituent selected from the group consisting of



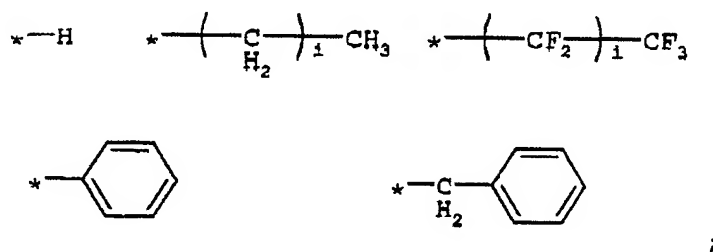
R<sup>1</sup> is a substituent selected from the group consisting of



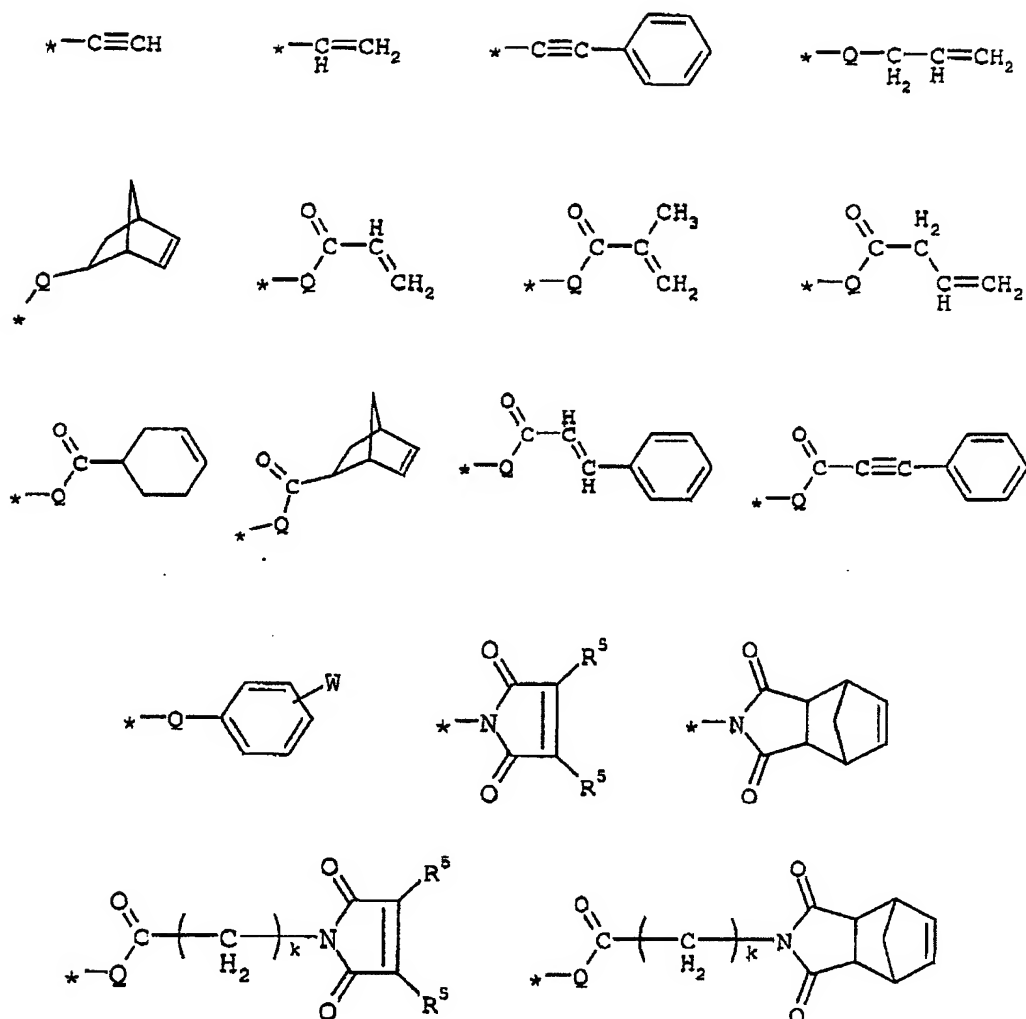
R<sup>2</sup> is a substituent selected from the group consisting of -H, an alkyl group having from 1 to 10 carbon atoms, an aryl group, and a heteroaryl group;

R<sup>3</sup> and R<sup>4</sup>, in each case independently, are substituents selected from the group consisting of a substituted alkylene, an unsubstituted alkylene, arylene, and cycloalkylene group;

R<sup>5</sup> is a substituent selected from the group consisting of

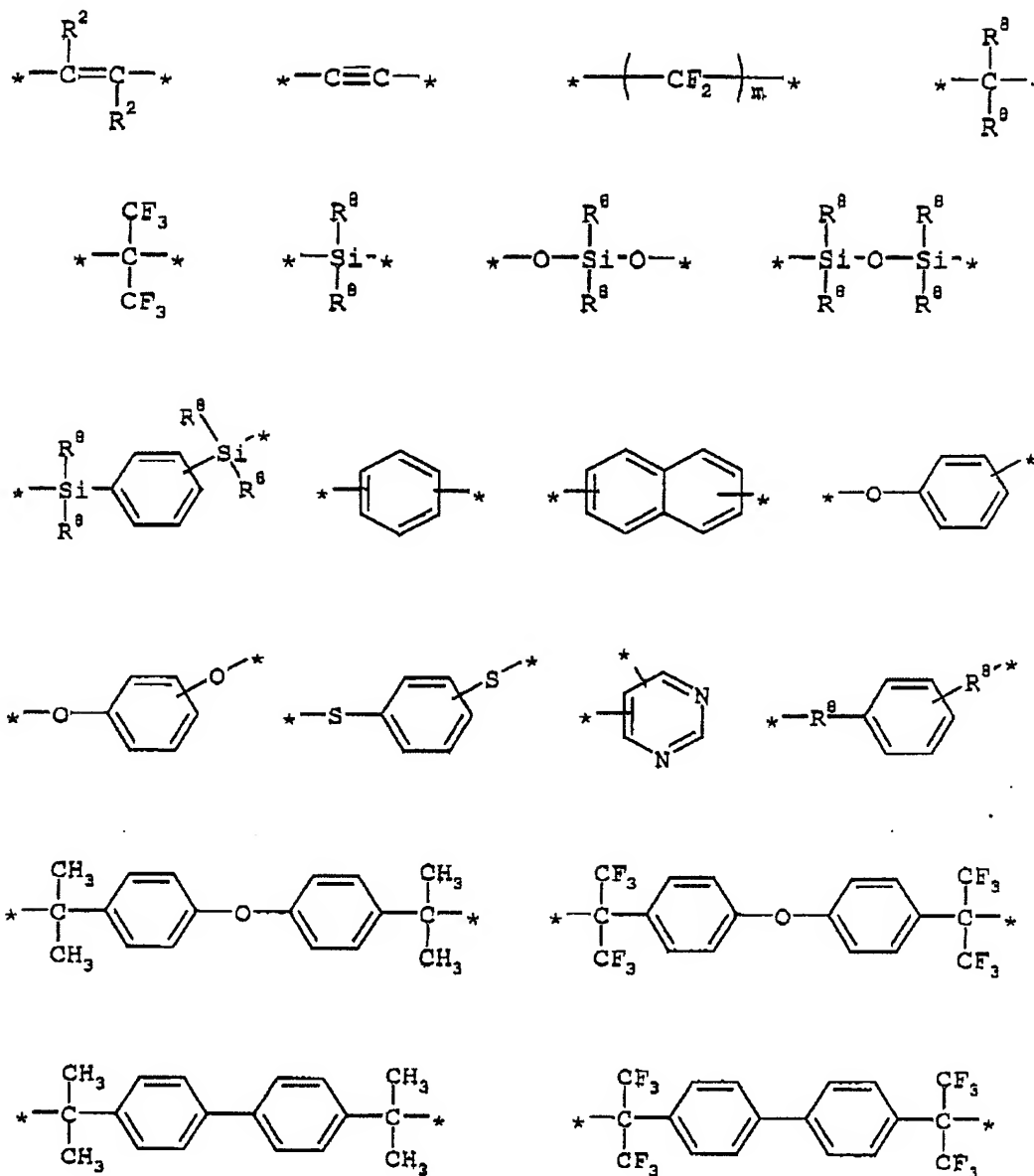


$R^6$  is a substituent selected from the group consisting of  $-H$ ,  $-CF_3$ ,  $-OH$ ,  $-SH$ ,  $-COOH$ ,  $-N(R^2)_2$ , an alkyl group, aryl group, a heteroaryl group, and



;

$R^7$  is a substituent selected from the group consisting of  $-O-$ ,  $-CO-$ ,  $-NR^4-$ ,  $-S-$ ,  $-SO_2-$ ,  $-CH_2-$ ,  $-S_2-$ , and



;

$R^a$  is a substituent selected from the group consisting of an alkyl group having from 1 to 10 carbon atoms, an aryl group, and a heteroaryl group;

a is an integer from 0 to 1;

b is an integer from 1 to 200;

c is an integer from 0 to 200;

d is an integer from 0 to 50;

e is an integer from 0 to 50;

f is an integer from 0 to 1;

g is an integer from 0 to 100;

h is an integer from 0 to 100;

i is an integer from 0 to 10;

k is an integer from 0 to 10;

l is an integer from 1 to 10;

m is an integer from 1 to 10;

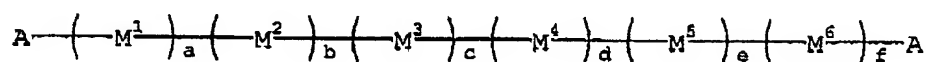
g and h are not simultaneously 0; and

l is an integer from 0 to 10 when R<sup>7</sup> is -CH<sub>2</sub>-.

11. An electronic component comprising a dielectric including a polybenzoxazole according to claim 7.

12. A process for producing an electronic component including a polybenzoxazole, which comprises:

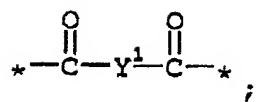
preparing, in a solvent, a solution of a poly-o-hydroxyamide having a formula I



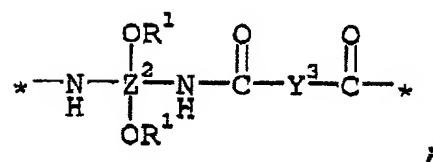
Formula I

wherein

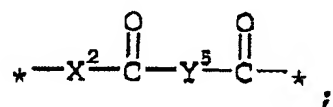
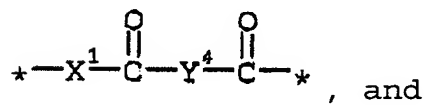
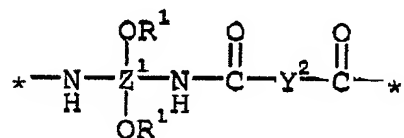
M<sup>1</sup> is



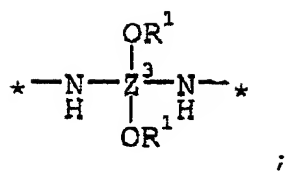
M<sup>2</sup> is



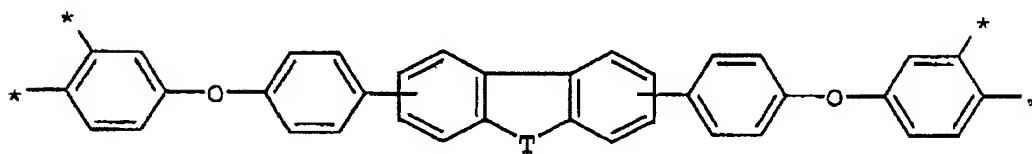
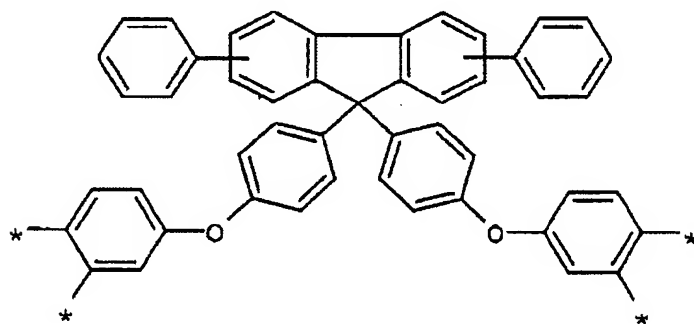
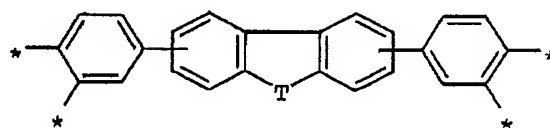
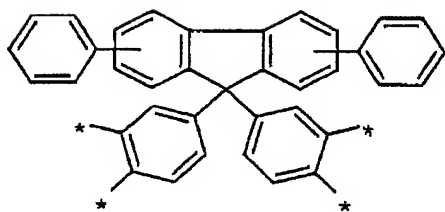
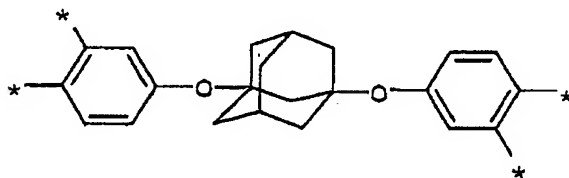
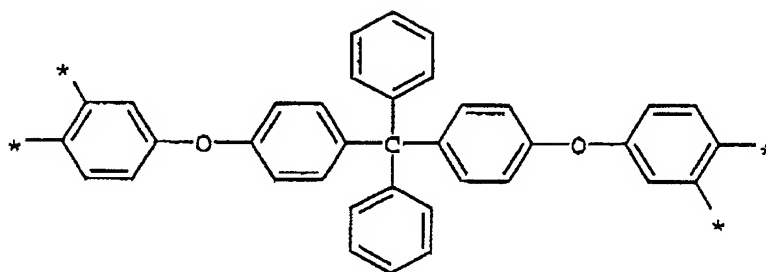
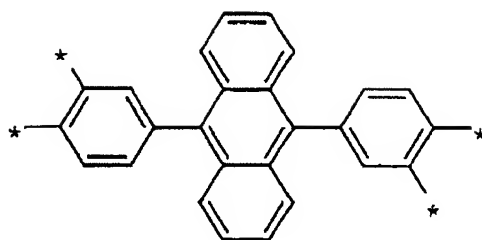
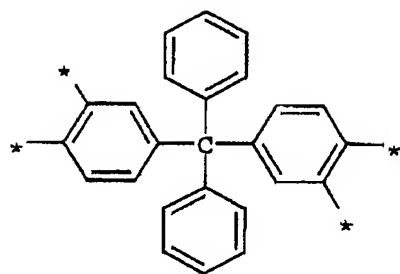
M<sup>3</sup>, M<sup>4</sup>, and M<sup>5</sup>, in each case independently, are monomers selected from the group consisting of



M<sup>6</sup> is

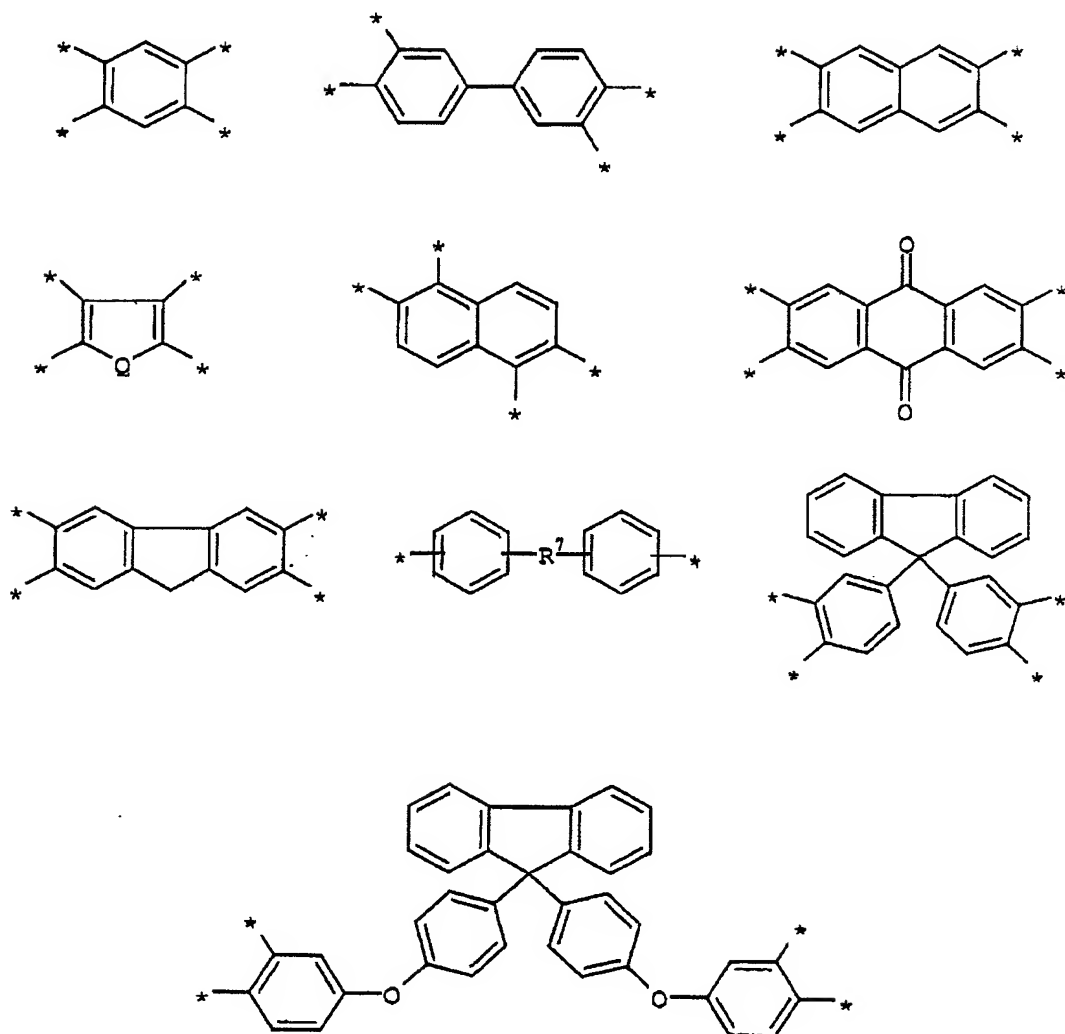


Z<sup>2</sup> is a substituent selected from the group consisting of



;

$Z^1$  and  $Z^3$ , in each case independently, are substituents selected from the group stated for  $Z^2$ , the group further consisting of



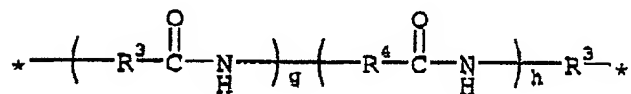
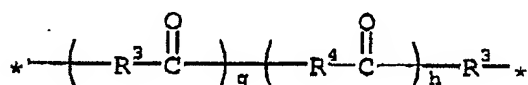
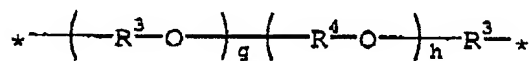
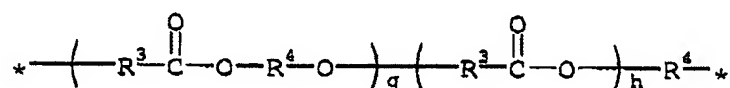
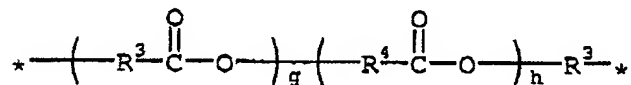
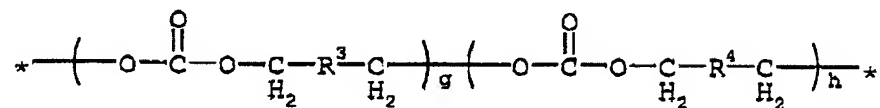
;

$Y^1$ ,  $Y^2$ ,  $Y^3$ ,  $Y^4$ , and  $Y^5$  are substituents selected from the group consisting of



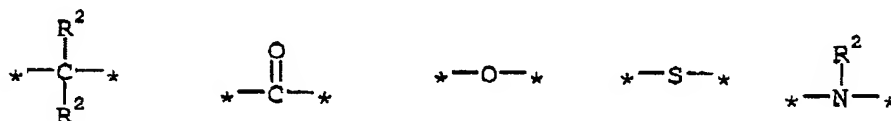


$X^1$  and  $X^2$ , in each case independently, are substituents selected from the group consisting of:



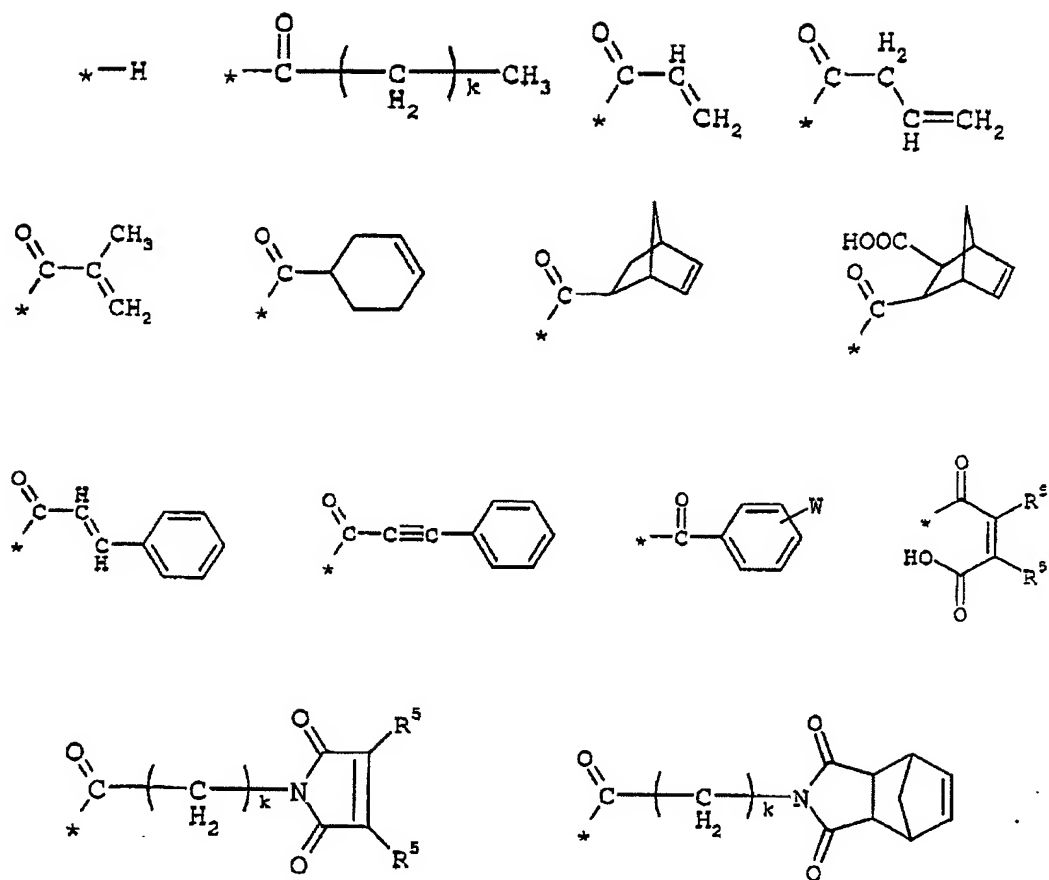
;

T is a substituent selected from the group consisting of

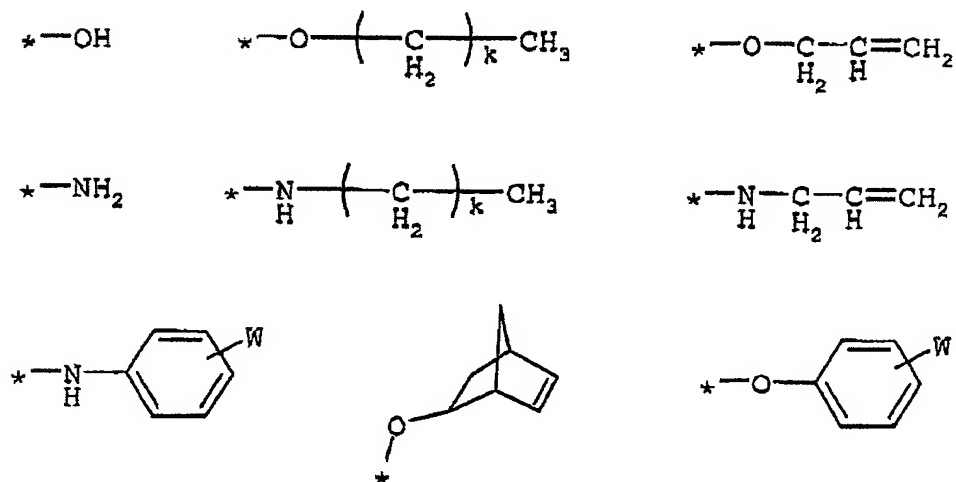


;

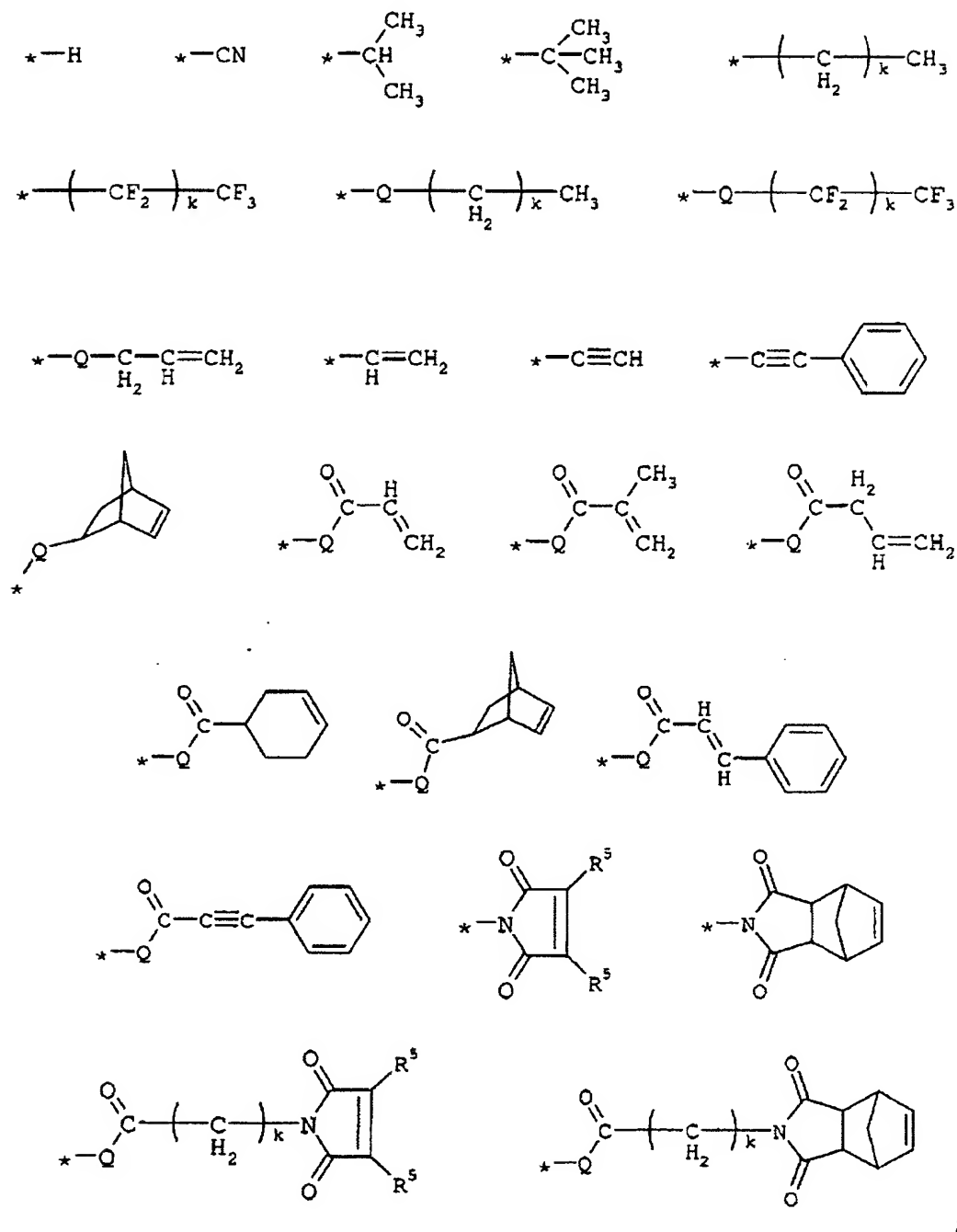
A, if at least one of  $a = 0$  and  $f = 1$ , is a substituent selected from the group consisting of



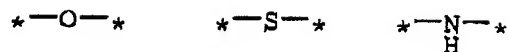
A, if at least one of  $a = 1$  and  $f = 0$ , is a substituent selected from the group consisting of



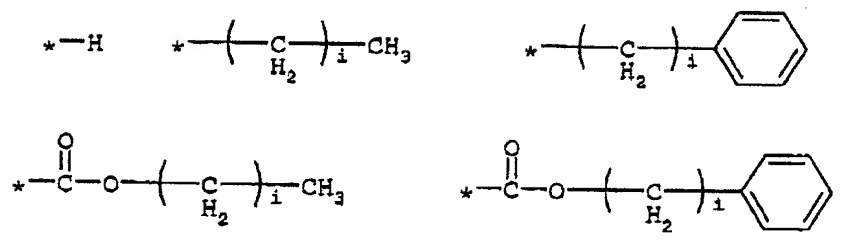
W is a substituent selected from the group consisting of



Q is a substituent selected from the group consisting of



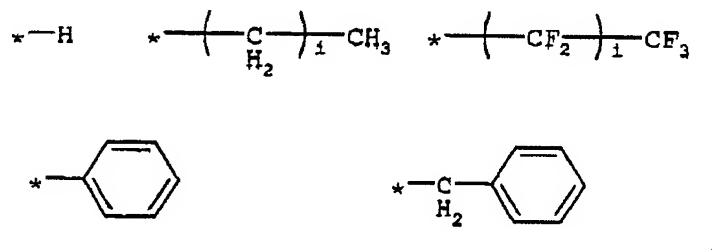
R<sup>1</sup> is a substituent selected from the group consisting of



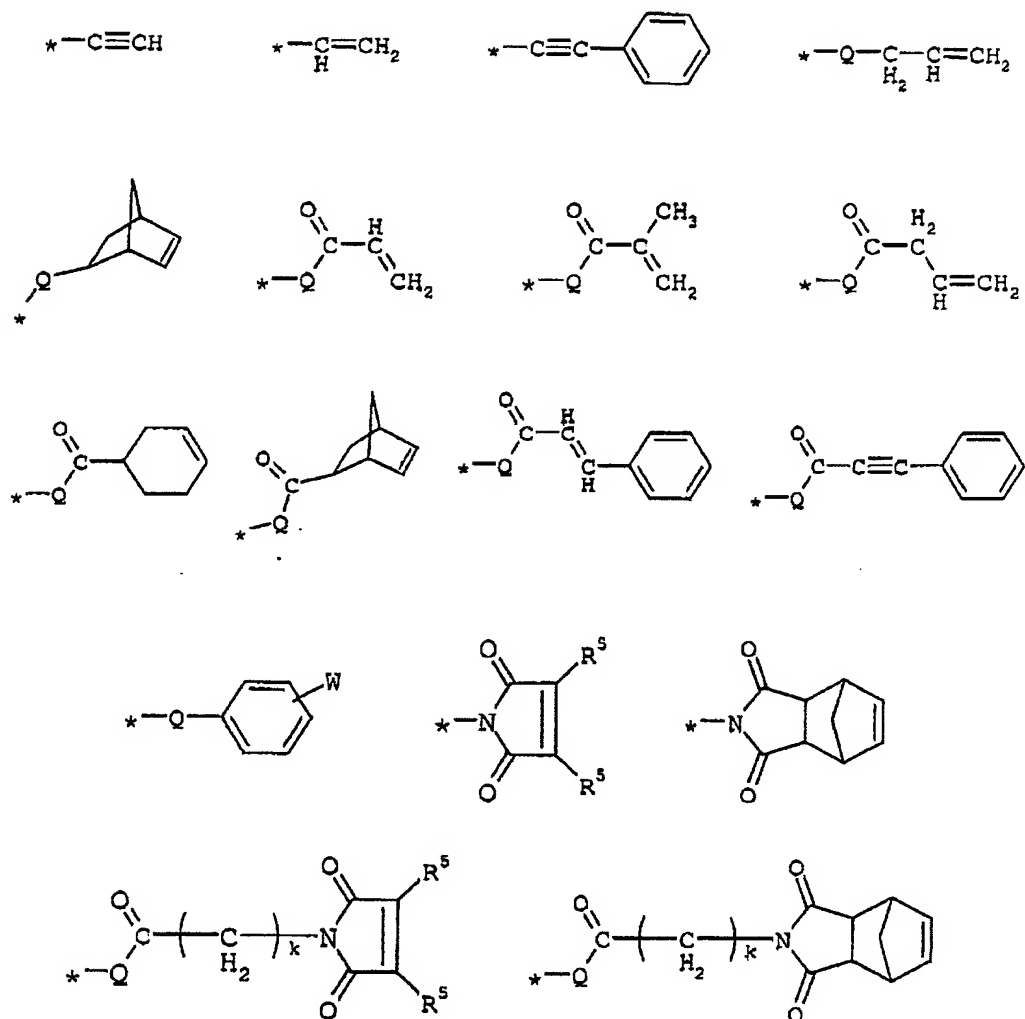
R<sup>2</sup> is a substituent selected from the group consisting of -H, an alkyl group having from 1 to 10 carbon atoms, an aryl group, and a heteroaryl group;

R<sup>3</sup> and R<sup>4</sup>, in each case independently, are substituents selected from the group consisting of a substituted alkylene, an unsubstituted alkylene, arylene, and cycloalkylene group;

R<sup>5</sup> is a substituent selected from the group consisting of

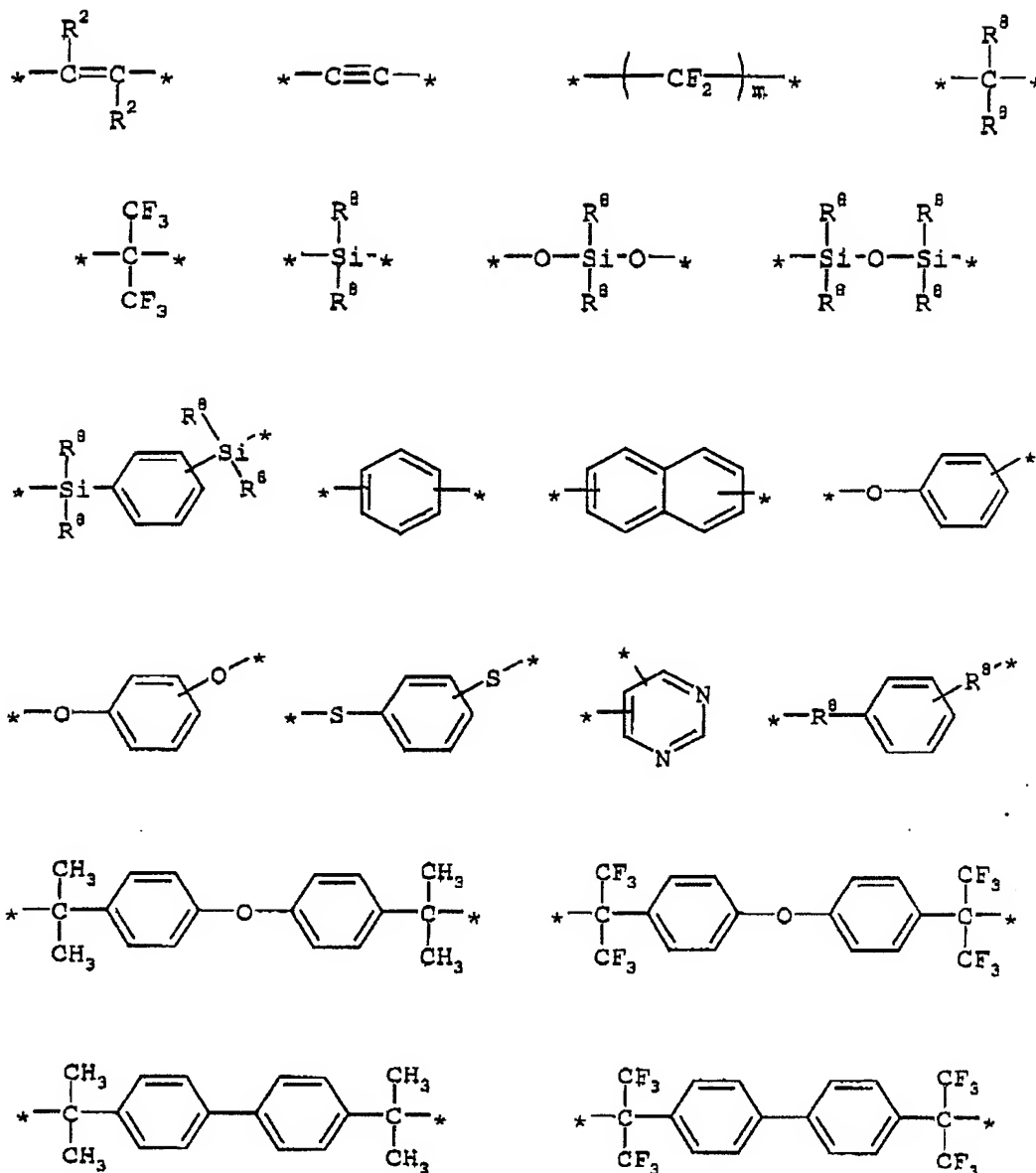


$R^6$  is a substituent selected from the group consisting of  $-H$ ,  $-CF_3$ ,  $-OH$ ,  $-SH$ ,  $-COOH$ ,  $-N(R^2)_2$ , an alkyl group, aryl group, a heteroaryl group, and



;

$R^7$  is a substituent selected from the group consisting of  $-O-$ ,  $-CO-$ ,  $-NR^4-$ ,  $-S-$ ,  $-SO_2-$ ,  $-CH_2-$ ,  $-S_2-$ , and



;

$\text{R}^a$  is a substituent selected from the group consisting of an alkyl group having from 1 to 10 carbon atoms, an aryl group, and a heteroaryl group;

a is an integer from 0 to 1;

b is an integer from 1 to 200;

c is an integer from 0 to 200;

d is an integer from 0 to 50;

e is an integer from 0 to 50;

f is an integer from 0 to 1;

g is an integer from 0 to 100;

h is an integer from 0 to 100;

i is an integer from 0 to 10;

k is an integer from 0 to 10;

l is an integer from 1 to 10;

m is an integer from 1 to 10;

g and h are not simultaneously 0; and

l is an integer from 0 to 10 when  $R^7$  is  $-CH_2-$ ;

applying the solution to a substrate;

evaporating the solvent to form a film;

heating the film to cyclize the poly-o-hydroxyamide of the formula I to give a polybenzoxazole according to claim 7;

structuring the film to obtain a resist structure having trenches;

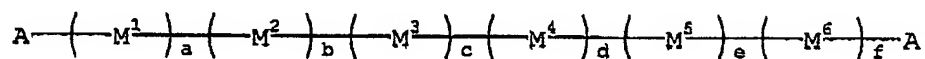


depositing a conductive material on the resist structure to fill the trenches the conductive material; and

removing excess conductive material.

13. A process for producing an electronic component including a polybenzoxazole, which comprises:

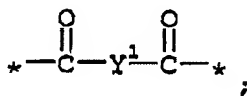
preparing, in a solvent, a solution of a poly-o-hydroxyamide having a formula I



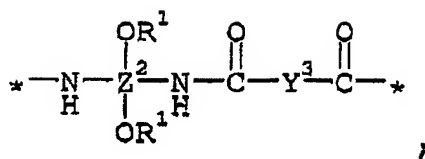
Formula I

wherein

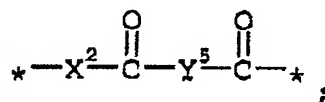
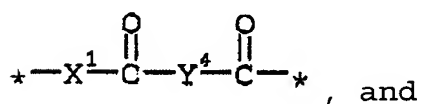
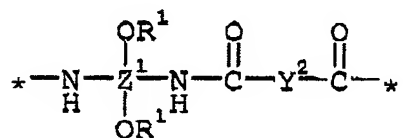
M<sup>1</sup> is



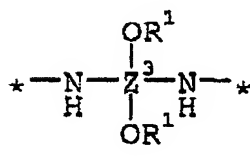
M<sup>2</sup> is



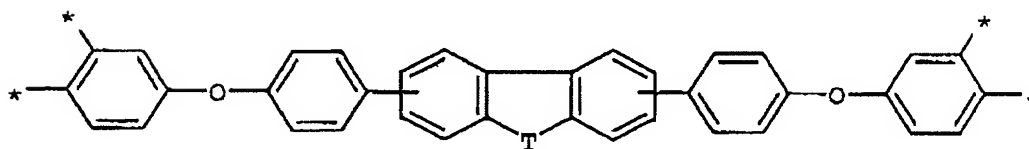
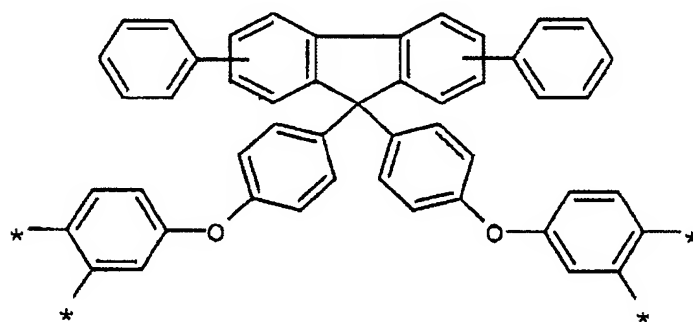
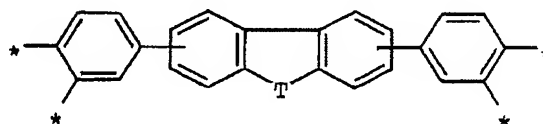
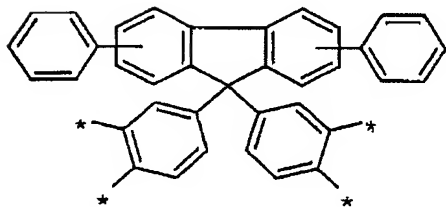
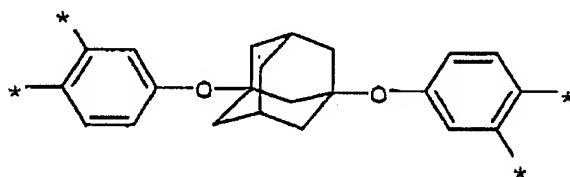
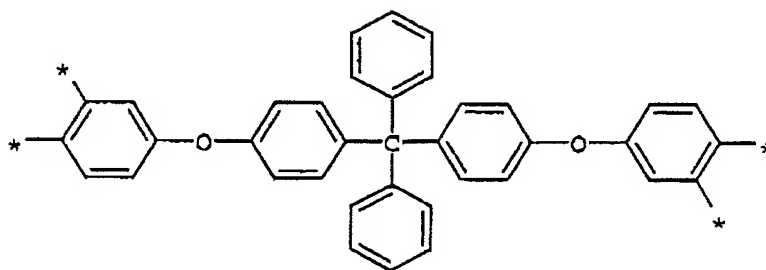
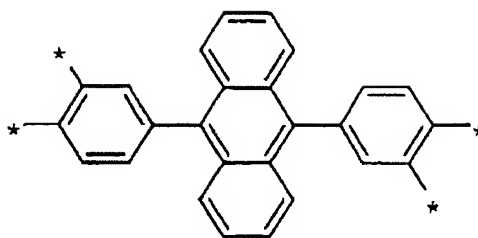
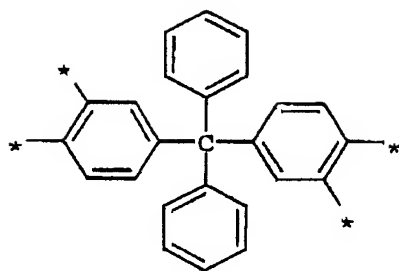
M<sup>3</sup>, M<sup>4</sup>, and M<sup>5</sup>, in each case independently, are monomers selected from the group consisting of



M<sup>6</sup> is

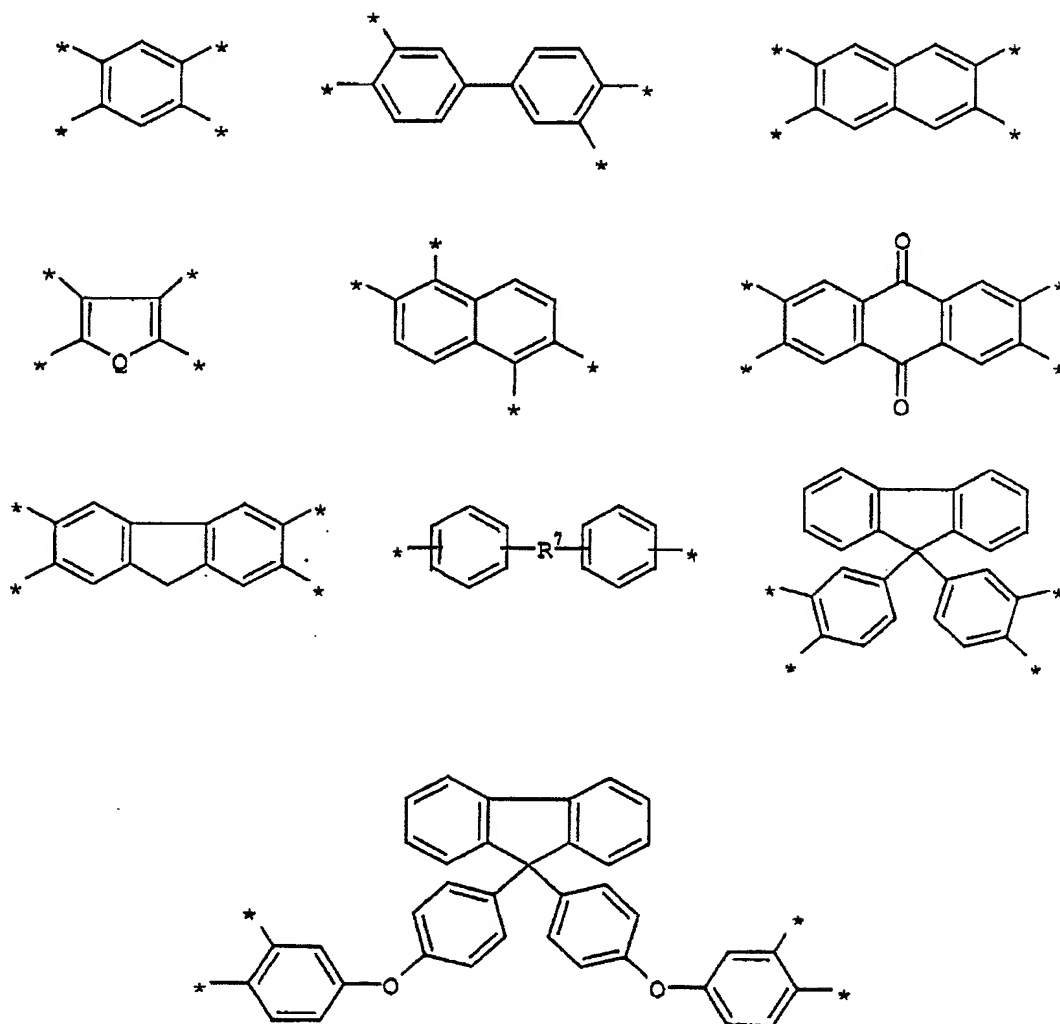


Z<sup>2</sup> is a substituent selected from the group consisting of



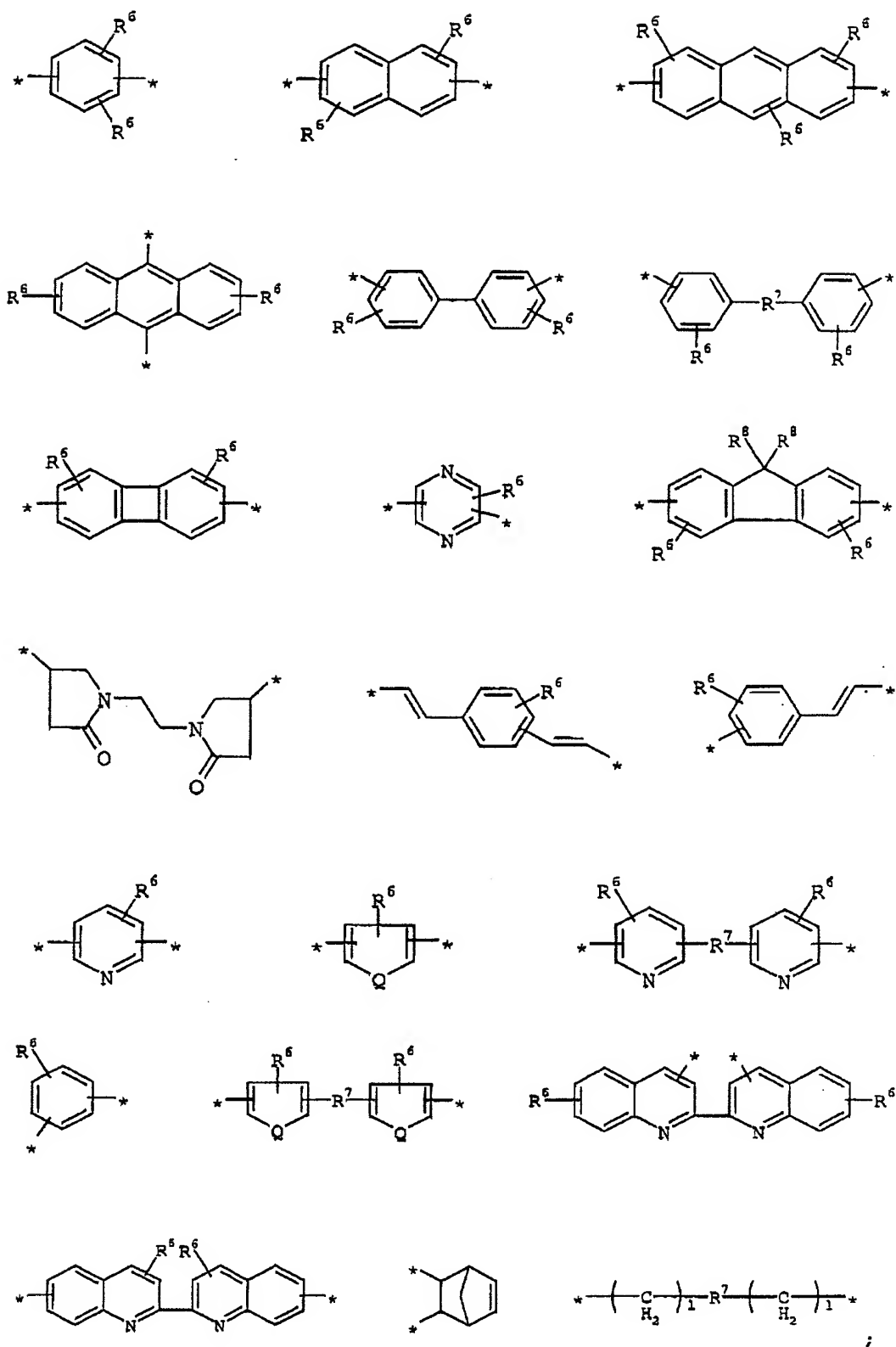
i

$Z^1$  and  $Z^3$ , in each case independently, are substituents selected from the group stated for  $Z^2$ , the group further consisting of

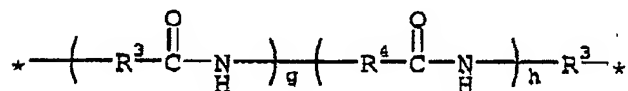
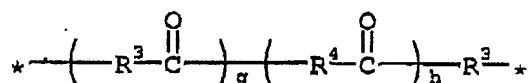
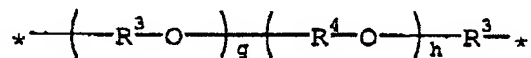
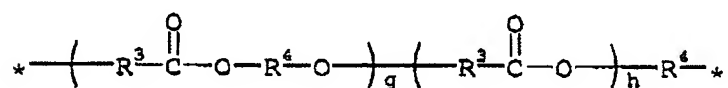
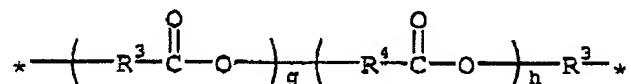
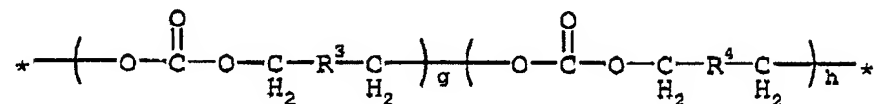


;

$Y^1$ ,  $Y^2$ ,  $Y^3$ ,  $Y^4$ , and  $Y^5$  are substituents selected from the group consisting of

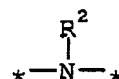
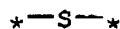
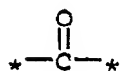
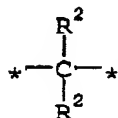


$x^1$  and  $x^2$ , in each case independently, are substituents selected from the group consisting of:



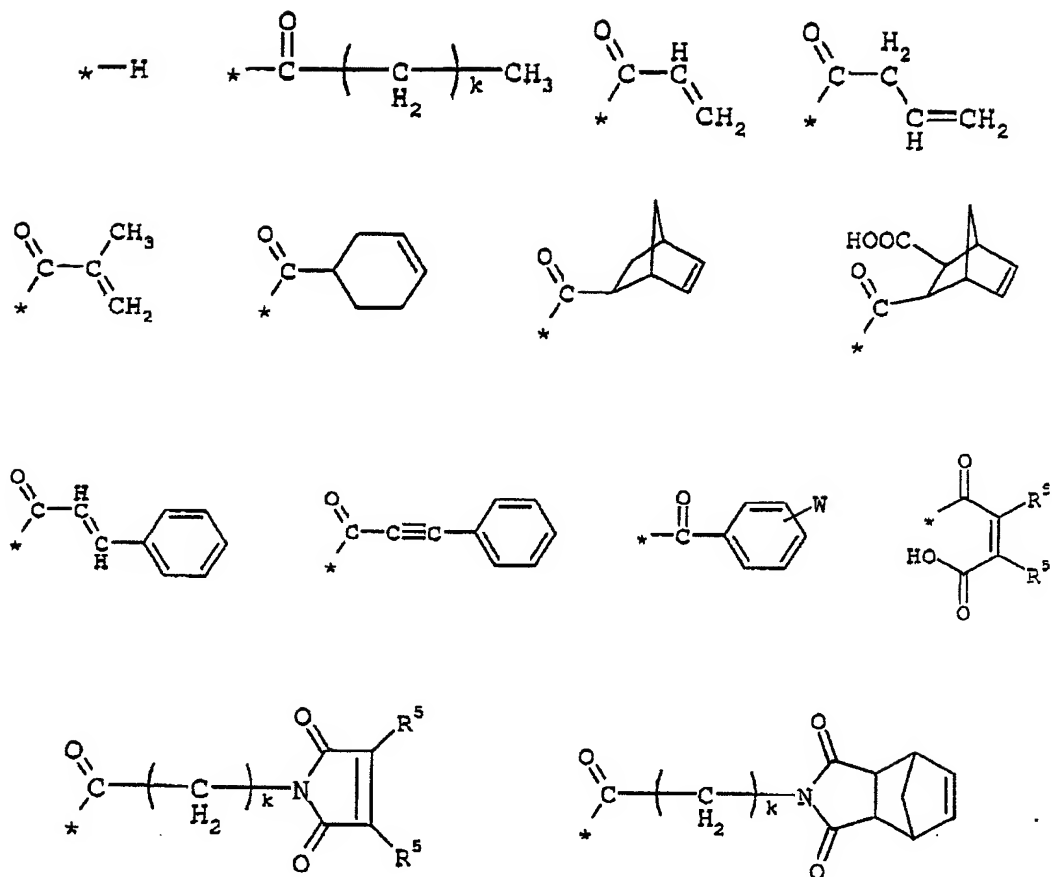
;

T is a substituent selected from the group consisting of

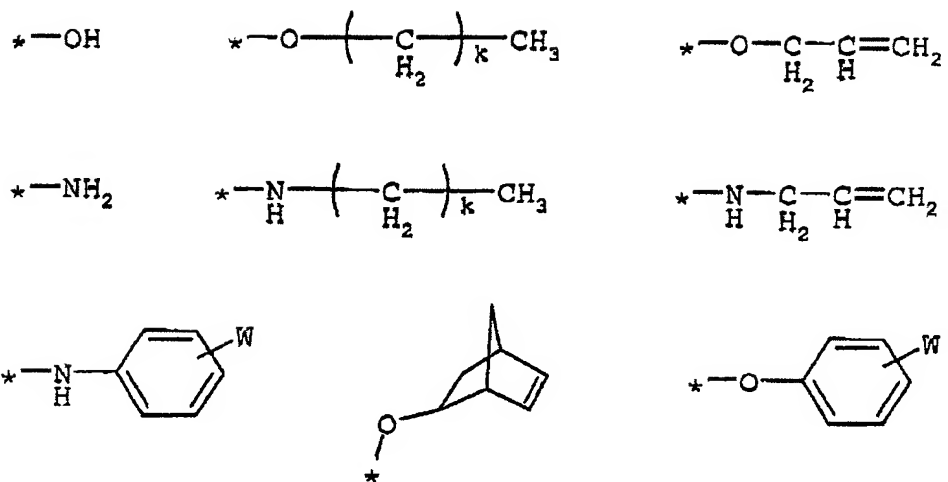


;

A, if at least one of  $a = 0$  and  $f = 1$ , is a substituent selected from the group consisting of



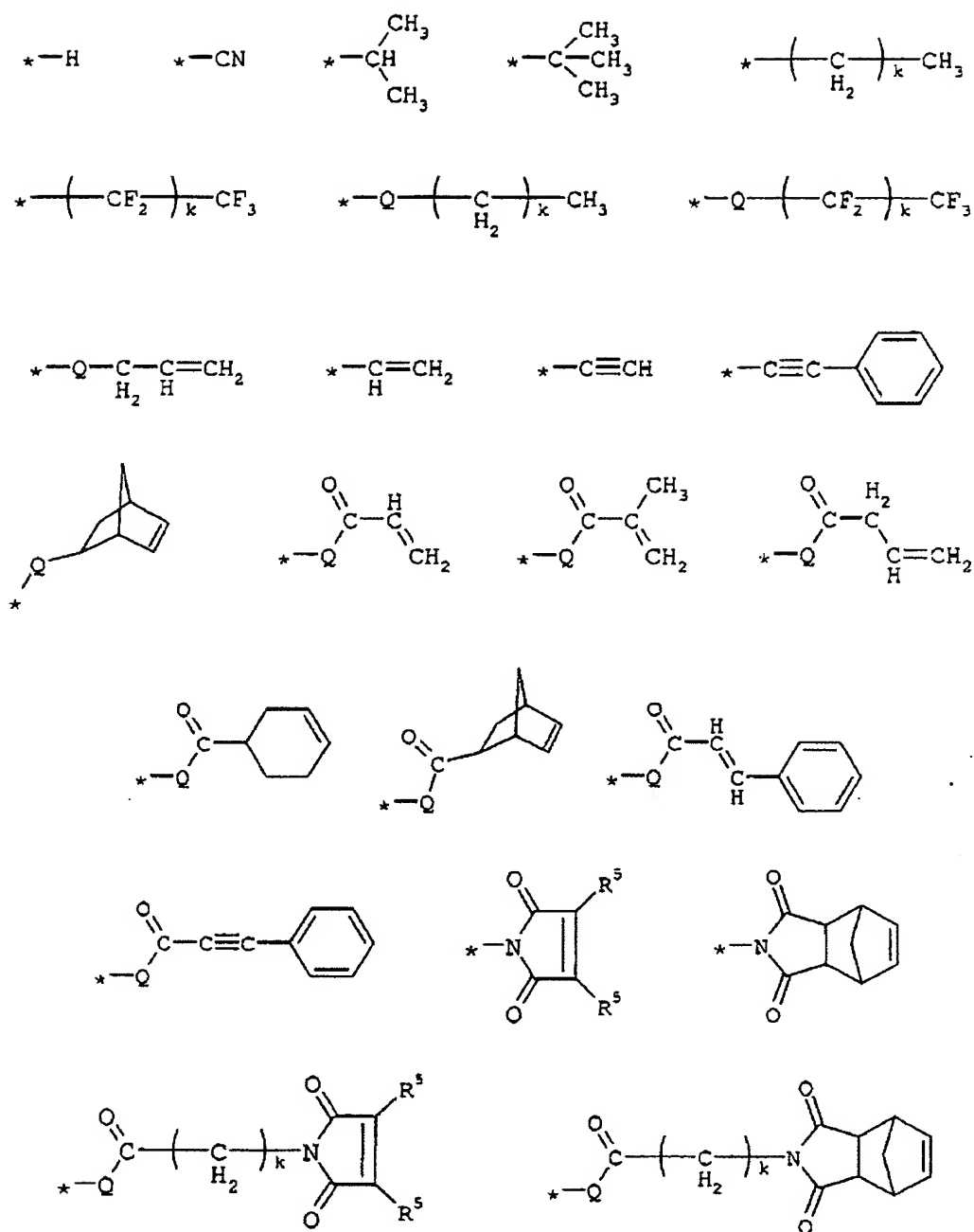
A, if at least one of  $a = 1$  and  $f = 0$ , is a substituent selected from the group consisting of



i

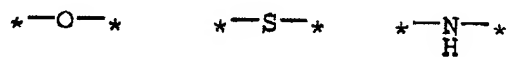
W is a substituent selected from the group consisting of





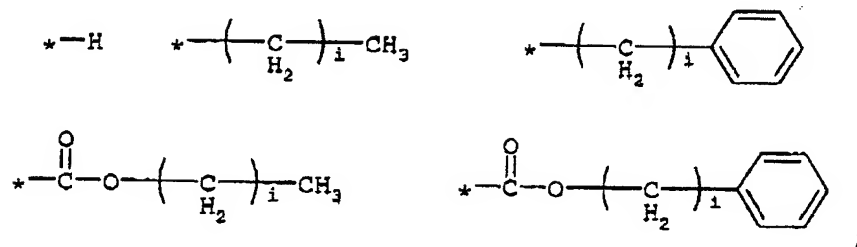
;

Q is a substituent selected from the group consisting of



;

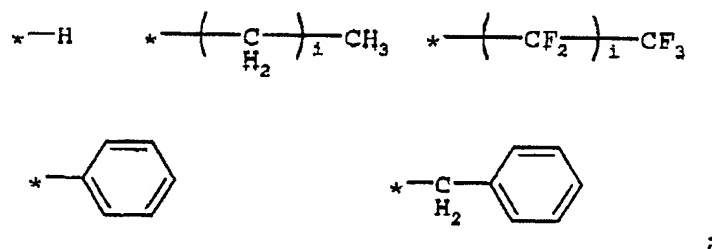
R<sup>1</sup> is a substituent selected from the group consisting of



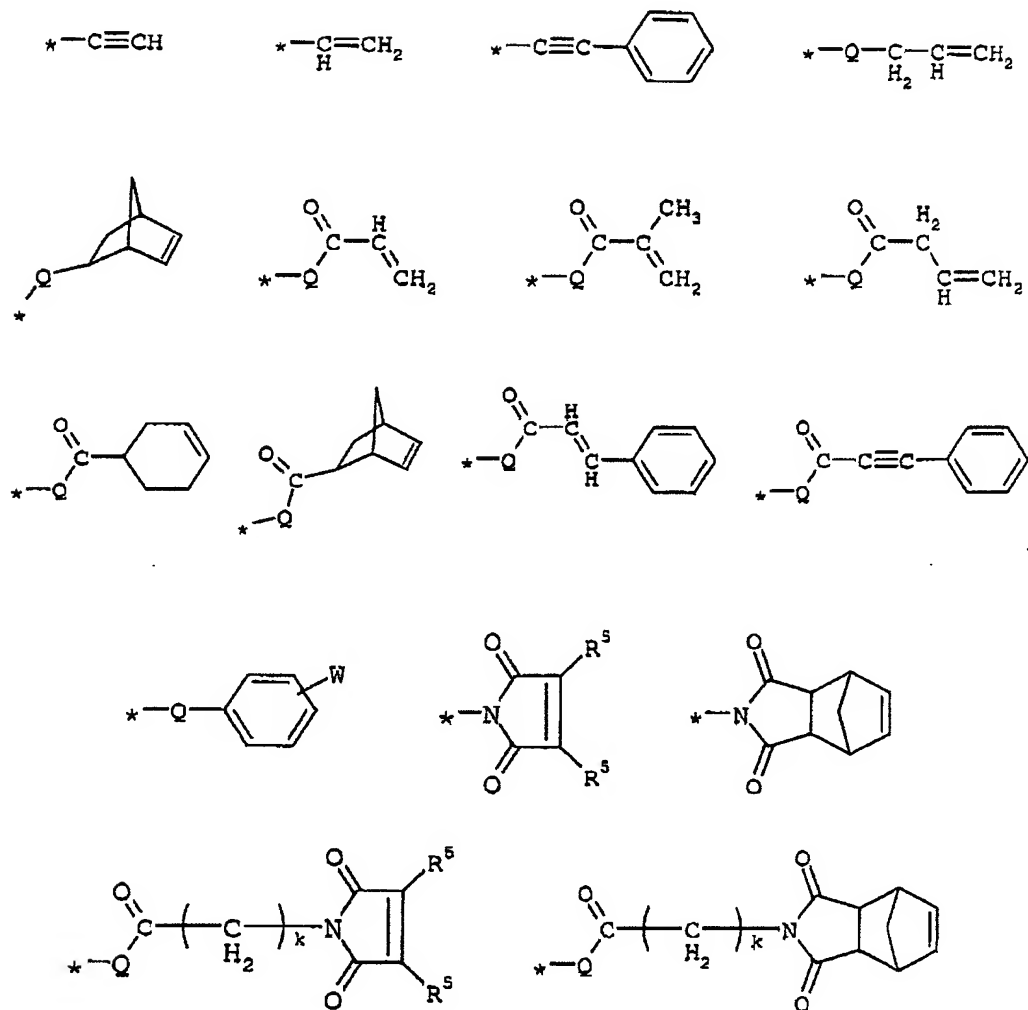
R<sup>2</sup> is a substituent selected from the group consisting of -H, an alkyl group having from 1 to 10 carbon atoms, an aryl group, and a heteroaryl group;

R<sup>3</sup> and R<sup>4</sup>, in each case independently, are substituents selected from the group consisting of a substituted alkylene, an unsubstituted alkylene, arylene, and cycloalkylene group;

R<sup>5</sup> is a substituent selected from the group consisting of

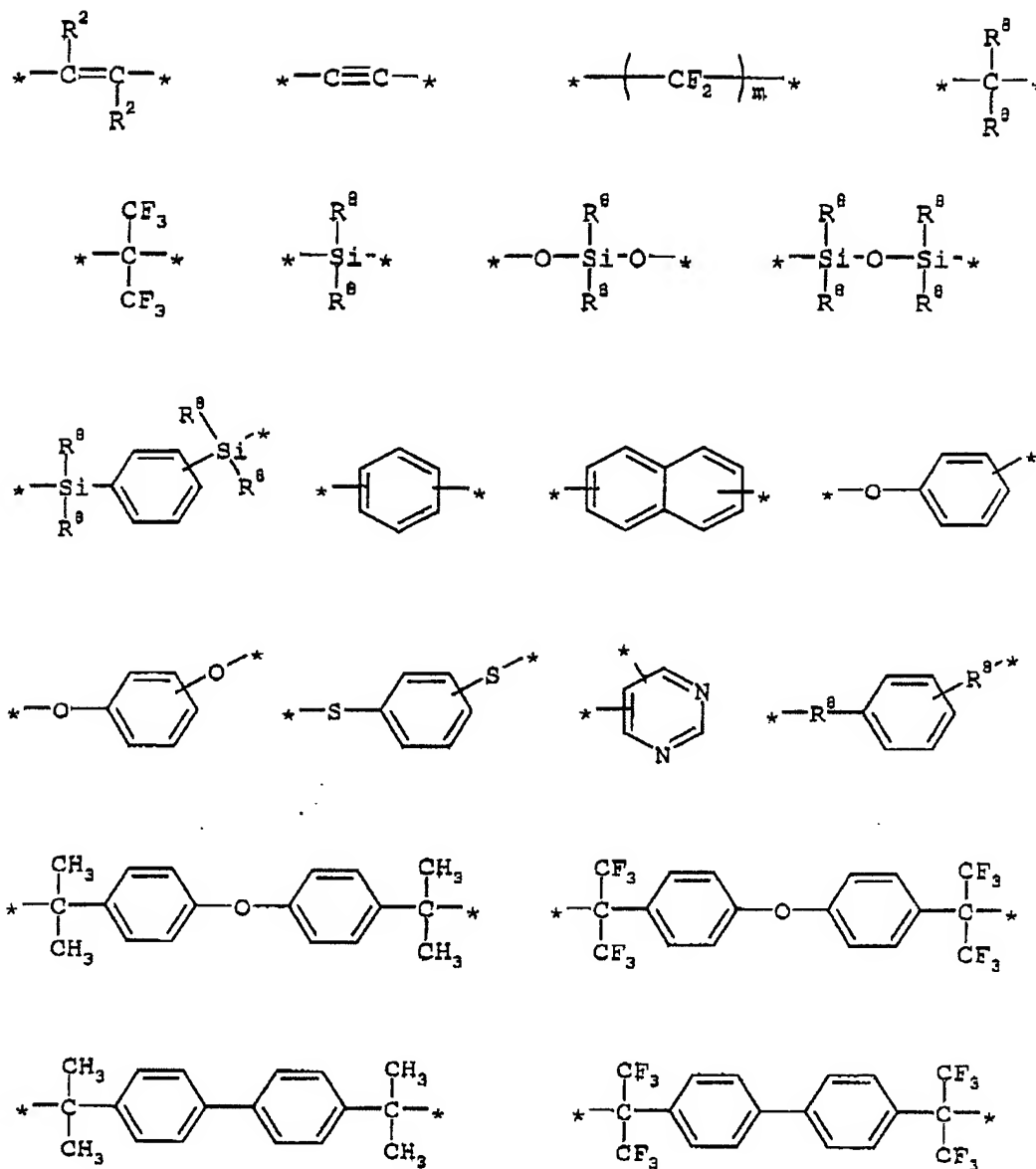


$R^6$  is a substituent selected from the group consisting of  $-H$ ,  $-CF_3$ ,  $-OH$ ,  $-SH$ ,  $-COOH$ ,  $-N(R^2)_2$ , an alkyl group, aryl group, a heteroaryl group, and



;

$R^7$  is a substituent selected from the group consisting of  $-O-$ ,  $-CO-$ ,  $-NR^4-$ ,  $-S-$ ,  $-SO_2-$ ,  $-CH_2-$ ,  $-S_2-$ , and



;

$R^a$  is a substituent selected from the group consisting of an alkyl group having from 1 to 10 carbon atoms, an aryl group, and a heteroaryl group;

a is an integer from 0 to 1;

b is an integer from 1 to 200;

c is an integer from 0 to 200;  
d is an integer from 0 to 50;  
e is an integer from 0 to 50;  
f is an integer from 0 to 1;  
g is an integer from 0 to 100;  
h is an integer from 0 to 100;  
i is an integer from 0 to 10;  
k is an integer from 0 to 10;  
l is an integer from 1 to 10;  
m is an integer from 1 to 10;

g and h are not simultaneously 0; and

l is an integer from 0 to 10 when  $R^7$  is  $-CH_2-$ ;

applying the solution to a substrate, the substrate having a surface with metallic structures and trenches between the metallic structures;

evaporating the solvent to fill the trenches with the poly-o-hydroxyamide having the formula I;

heating the substrate to cyclize the poly-o-hydroxyamide of the formula I to yield the polybenzoxazole according to claim 4.